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P L A Y S.

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| T He Relapse, or Virtue in
Danger.
Spanish Wives.
Unnatural Brother.
Plot and no Plot.
Younger Brother, or Amorous
Jilt.
Old Bachelor.
Agnes de Castro.
Rover, or Banish'd Cavalier.
Rule a Wife and have a Wife.
Country Wife.
Rehearsal.
Anatomist, or the Sham-Doc-
tor.
Cyrus the Great, or the Tra-
gedy of Love.
Don Quixot in three Parts.
Roman Bride's Revenge.
Marriage-hater match'd.
Country Wake.
Neglected Virtue.
Phyrrhus King of Epirus.
Very good Wife.
Woman's Wit, or Lady in
Fashion.
The Gallants.
Sullen Lovers.
Humourists.
Mackbeth.
Timon of Athens.
Oedipus.
Ibrahim the 13th, Emperour of
the Turks.
Canterbury Guefts,
Lost Lovers.
Love's a Jest,
Plain Dealer.
Brunus of Alba. | London Cuckolds.
Sir Courtly Nice.
Earl of Essex.
Squire of Allatia.
All for Love.
Devil of a Wife.
Lancashire Witches.
Cleomenes.
Don Sebastian.
Oroonoko.
Abdelazar.
Pastor Fidio.
Love for Money.
Love's last Shift, or the Fool
in Fashion.
Young King, or the Mistake.
Roundheads, or the Good Old
Cause.
City Heiress,
Conquest of Granado.
Cheats.
Titus Andronicus.
City Politicks.
Debauchee.
Venice preserved.
Rival Queens.
Villain.
Sir Antony Love.
Theodosius.
Princess of Cleve.
Antony and Cleopatra.
Disappointment.
Fond Husband.
Methridates.
Cæsar Borgia.
Woman Captain.
Rival Ladies.
Wives Excuse.
Bury Fair.
Tempest. |
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A
TREATISE
OF
MEDICINES

CONTAINING

An Account of their Chymical principles,
the experiments made upon 'em, their
Various preparations, their Vertues, and
the modern way of using them.

Together with a short View of the Nature
and Periods of the Diseases, in which they
are proper, and some Cautions relating to
the Disorders they sometimes occasion.

The Medicines are rang'd in their proper Classes
according to their Vertues, and drawn up in
Tables for the Readers conveniency, with
their just Doses annex'd.

Written Originally in *French*, by M. Taurry, M.
D. A Member of the Colledg of Physicians,
and Fellow of the Royal Society at *Paris*.

Translated from the last Edition.

L O N D O N,

Printed for Richard Wellington, at the Dolphin and
Crown the West End of St. Paul's Church-Yard. Ar-
thur Bettefworth, at the Red Lyon on London Bridge,
and Bernard Lintott, at the Cross Keys in St. Mar-
tins Lane near Long Acre. 1700.



872:11

The Author's P R E F A C E.

THe former Editions of this Treatise, have met with such a favourable reception from the Publick, that I flatter my self with equal Success for this, which the Reader will find more compleat and correct. Here, I've added a large number of Observations and Analytical Resolutions of Med'cines, that were not in the former. Most of the Analysis's were perform'd by Mr. *Bourdelin*, Fellow of the Royal Society, a Man of unquestioned exactness. I have not condescended to all the Particulars of his Discoveries, because I thought it sufficient for my present purpose, to point out the Principles in a general manner; and referr my Reader to the Transactions of our Royal Society, for a more circumstantial account. The other Analysis's are equally true, as being perform'd by my self, or borrow'd from other Chymists, whose Business 'tis to enquire into such things, and whose sincerity I cannot call in question.

The Experiments alledged for explaining the natures of Medicines, were either made by my self, or publish'd in the Transactions of the Royal Society, or taken from the

The Preface.

Writings of some celebrated Philosopher, such as the Honourable Mr. *Boyle*, &c. I did not take the pains to examine the truth of what I found advanced by persons of known Worth and Integrity, and confirm'd by the daily experience of all Chymists.

These Experiments I have cast into three heads, as they relate either to the *Composition*, or *Analysis* or *Mixing* of Bodies. The *Composition* discovers the principles that compose Salt, Nitre, Allum, Vitriol, Bloodstone, Sulphur, Rosins, Gums, &c. For an Artificial mixture of these Principles, presents us with Compounds in imitation of Nature; and indeed 'tis to be wish'd we were better acquainted with these Artificial Composures, because they give unquestion'd Evidence of the Natures of mix'd bodies.

Next to Artificial Compositions, Analysis's are a proper way for unfolding the Principles of mix'd Bodies, providing we account for the alterations occasion'd by the Fire. But of themselves they are Defective, because they present us oftentimes with Principles mingled together, that cannot be separated without the Addition of some Foreign Body; and besides, the Fire is not able to separate the Principles of several Bodies, namely, Stones, Mettals, and some Vegetables, such as Camphyr.

Now to supply this defect, we must have recourse to the addition or mixing of Bodies together, according to the best experiments. Thus the Solution of Tournisel discovers Acids, that

The Preface.

that of *Sublimatum* points to Alkalies ; Acid Liquors distinguish the Med'cines they're mix'd with, by fermenting with some, and peaceably joyning with others. The Oyl of Tartar by heightning its Colour gives the Signal for Sulphurs, and many other Bodies mix'd together make Reciprocal discoveries of their Natures.

I have likewise furnish'd you with some General Experiments, tending to explain the Alterations occasion'd by Med'cines, in the Humors and parts of the Body. Upon this score I have presented you with the Analysis of the Blood, particularly of its white and red parts ; with an Explication of the different effects of Principles, seemingly alike and rang'd in the same class, and the different ways in which Acids and fix'd or Volatil Alkalies may alter the different parts of the Body. Together with an account of the influence of these Principles upon the Chyle, Gall, Milk, Urine, &c.

Then I run over the large field of Tasts, and Smells, and back my advances upon that head, with several important Experiments. And in fine conclude the first part with an enquiry into the preparations, and the ways of mixing or compounding Med'cines. Which was not contain'd in the former Editions ; but is now added for the sake of Young Physicians, that stand in need of General Rules to direct 'em in the forms and methods of prescribing Recipe's.

The Preface.

In the Second part I treat Evacuating Medicines, and explain in what manner they cause the Evacuation, how their different kinds Operate upon the parts of the Body, or upon the humors, so as to cause such Violent Currents as happen sometimes; in what Diseases, and what Periods of Diseases, they are proper; what are the disorders they occasion when administred unseasonably, or in too large a Dose, and the most proper means to redress 'em. Sometimes by the way I disprove the Opinions of some Authors; For Instance, I make out the usefulness of Purgatives against *Vanbelmont*; I shew that Purgatives in the height of Continual Fevers, and Emetics when the pulse is convulsive and in extream Weakness, are equally improper, in opposition to the Opinion and Practice of some Authors. I add the signs of Concoction and several other important Observations, which tho they lye not directly in my Road, yet the neglect or Misapplication of 'em is so common, and withal so pernicious, that I thought my self oblig'd to undeceive the publick, by presenting 'em to their View.

In Discoursing of Sudorificks and Diureticks, I strike out their Divisions, and propose such Explications as are suitable to the nature of the Med'cines, and that of the Disease which requires 'em. Having examin'd the Nature of Evacuating Med'cines in General, I pass on to a Particular Account of their Principal Members, whether Vegetable, Animal

The Preface.

mal or Mineral, in which I describe their Analysis, and enforce it by Experiments; I lay open the Vertues that Experience intitles 'em to; I shew their various Preparations; and for the Reader's Conveniency, have drawn 'em up in Particular Tables, with their Doses, and the manner of using them.

I maintain the usefulness of Evacuating Med'cines against those who are only for Alteratives, and at the same time make out the necessity of Alteratives in opposition to those who enjoyn nothing but Bleeding and Purgings. The whole third part of this Treatise is appropriated to Alteratives, or those Med'cines that insensibly alter the Disposition of the Humors. First of all I treat those, which by altering the Texture of the Blood, occasion a sort of Evacuation, namely, such as bring down the Terms, or Loches, &c. Then I explain such as Operate upon the whole Mass of Blood, without any ensuing Evacuation. At last a description of Specifics concludes that Part.

In the Second and Third parts I was obliged to describe a great many Chymical Operations with all possible clearness and brevity. In some cases I depart from the Common Method, reckoning my Alterations for Improvements; for Instance, in making *Crocus Metallorum*, I order the matter to be thrown in by degrees at several times, instead of kindling it all at once with a Coal. Because by this means the *Crocus* becomes more reddish, and comes nearer to a Saffron Color;

'tis

The Preface.

'tis not so violent as otherwise, and purges a little by Stool; and besides, the operation in this fashion is much easier.

'Twere tedious to recount all the particular Contents of this Treatise; however I cannot forbear to acquaint the Reader, that here he will meet with an Explication of several Chronical Diseases, and the manner in which Med'cines operat with respect to their different Symptoms.

The fourth Part presents you with an account of External Remedies, and the chief Distempers that call for 'em. 'Tis true, The same Medicines may be useful for internal Diseases, and administred inwardly; but their principal and most noted effects point to the External Class.

T H E

THE CONTENTS

Of the FIRST Part.

Ch. I. O F Medicines in General.	p. 1
Chap. II. Of the Choice of Medicines, and discovery of their Vertues.	p. 14
Chap. III. An Enquiry into the other ways of Disco- vering the Vertues of Medicines.	p. 18
Chap. IV. Of the Analysis or Resolution of Medi- cines.	p. 23
Chap. V. Of Tastes; particularly of Insipid, Unctuous, Nitrous and Bitter Medicines.	p. 28
Chap. VI. Of Acid, Sharp, and Aromatick Medi- cines.	p. 34
Chap. VII. Of other Tastes.	p. 40
Chap. VIII. Of the Smell of Medicines.	p. 44
Chap. IX. Of Experiments upon Medicines.	p. 47
Chap. X. Of the Preparations of Medicines.	p. 49
Chap. XI. Of the Compositions of Medicines and their forms.	p. 55
Chap. XII. Of External Liquid forms.	p. 70
Chap. XIII. Of Solid Internal forms of Medicines.	p. 89
Chap. XIV. Of the Externaly Dry forms.	p. 106

The

The CONTENTS.

The Contents of the SECOND Part.

Chap. I. OF Emeticks	p. 115
Chap. II. Of Antiemeticks, or Remedies against Vomiting.	p. 142
Chap. III. Of Purgatives:	p. 149
Chap. IV. Of Remedies for an over purgation.	p. 187
Chap. V. Of Diureticks.	p. 193
Chap. VI. Of Anti-Diureticks.	p. 227
Chap. VII. Of Sudorificks and Diaphoreticks.	p. 230
Chap. VIII. Of Anti-Diaphoreticks.	p. 260
Chap. IX. Of Fluxing Medicines, or such as cause a Salivation.	p. 262
Chap. X. Of such Medicines as stop a Salivation.	p. 271
Chap. XI. Of Sneefing Medicines.	p. 275

The Contents of the THIRD Part.

Chap. I. OF Alteratives.	p. 1
Chap. II. Of the Medicines which bring down the Terms,	p. 7
Chap. III. Of the Medicines which stop the overflowing of the Terms.	p. 24
Chap. IV. Of the Medicines which facilitate Labor, and expel the Child and Afterbirth.	p. 34
Chap. V. Of the Medicines which prevent Abortion.	p. 41
Chap. VI. Of the Medicines which expell the Loches.	p. 47
Chap. VII. Of the Medicines that moderate the Run- ning of the Loches.	p. 49
Chap. VIII. Of Remedies for the whites.	p. 53
Chap.	

The CONTENTS.

Chap. IX. Of <i>Carminative Medicines</i> or such as <i>dispel Wind.</i>	p. 58
Chap. X. Of <i>Pectoral</i> or <i>Bechical Medicines.</i>	p. 66
Chap. XI. Of <i>Alteratives</i> properly so <i>Call'd.</i>	p. 77
Chap. XII. Of <i>Attenuating</i> and <i>Aperient Medicines.</i>	p. 79
Chap. XIII. Of <i>Incrassating Medicines.</i>	p. 85
Chap. XIV. Of <i>Narcoticks.</i>	p. 93
Chap. XV. Of <i>Styptick</i> or <i>Astringent Medicines.</i>	p. 107
Chap. XVI. Of <i>Febrifugas</i> , or <i>Medicines against Fevers.</i>	p. 116
Chap. XVII. Of <i>Anti Venereal Medicines.</i>	p. 127
Chap. XVIII. Of <i>Remedies for the Scurvey,</i>	p. 141
Chap. XIX. Of <i>Remedies for Hypochondriack Distempers.</i>	p. 145
Chap. XX. Of <i>Specificks in General.</i>	p. 147
Chap. XXI. Of <i>Cephalics: and Remedies for the Epilepsy, Apoplexy, and Palsy.</i>	p. 149
Chap. XXII. Of <i>Remedies for Melancolick Delicium's, Madnes, and Rabies Canina.</i>	p. 162
Chap. XXIII. Of <i>Cordial Medicines and Counter-Poisons.</i>	p. 167
Chap. XXIV. Of <i>Remedies for the Pleurisy.</i>	p. 175
Chap. XXV. Of <i>Stomachical Medicines.</i>	p. 181
Chap. XXVI. Of <i>the Medicines which kill Worms.</i>	p. 185
Chap. XXVII. Of <i>Remedies for a Dysentery.</i>	p. 188
Chap. XXVIII. Of <i>Hepatick or Splenetick Medicines.</i>	p. 191
Chap. XXIX. Of <i>Anti-hydropical Medicines.</i>	p. 193
Chap. XXX. Of <i>Lithontripticks</i> or <i>Medicines which dissolve the Stone,</i>	p. 197
Chap. XXXI. Of <i>Hysterical Medicines.</i>	p. 199
Chap. XXXII. Of <i>the Medicines which provoke to Love.</i>	p. 202
	Chap.

The CONTENTS.

Chap. XXXIII. <i>Of the Medicines which keep under a morous Thoughts.</i>	p. 204
Chap. XXXIV. <i>Of the Remedies which increase or diminish Milk.</i>	p. 206
Chap. XXXV. <i>Of Remedies for the Gout.</i>	p. 209
Chap. XXXVI. <i>Of Remedies for the Piles.</i>	p. 217

The Contents of the FOURTH Part.

Of Remedies for External Disorders.

Chap. I. O F <i>Anodyns.</i>	p. 224
Chap. II. <i>Of Repercussives and Astringents.</i>	p. 226
Chap. III. <i>Of Resolatives.</i>	p. 229
Chap. IV. <i>Of Ripening and Emollient Medicines.</i>	p. 232
Chap. V. <i>Of Suppuratives.</i>	p. 234
Chap. VI. <i>Of Mundifying and Detergent Medicines.</i>	p. 236
Chap. VII. <i>Of Corrosives and Causticks.</i>	p. 238
Chap. VIII. <i>Of Incarnating Medicines.</i>	p. 241
Chap. IX. <i>Of Vulneraries.</i>	p. 243
Chap. X. <i>Of Cicatrizing Medicines.</i>	p. 249
Chap. XI. <i>Of Blistering Medicines.</i>	p. 250
Chap. XII. <i>Of Remedies for Burnings.</i>	p. 253
Chap. XIII. <i>Of Remedies for a Caries.</i>	p. 255
Chap. XIV. <i>Of Remedies for a Gangreen.</i>	p. 257
Chap. XV. <i>Of Remedies for a Tetar or Ringworm.</i>	p. 260
Chap. XVI. <i>Of Remedies for the Scab.</i>	p. 262
Chap. XVII. <i>Of Remedies for a Scurf on the Head.</i>	p. 264
Chap. XVIII. <i>Of Remedies for the Kings Evil.</i>	p. 267
Chap. XIX. <i>Of Remedies for tumors in the Legs,</i> call'd	

The CONTENTS.

<i>call'd Lupi.</i>	p. 270
Chap. XX. Of Remedies for making the hair grow or fall off.	p. 271
Chap. XXI. Of Remedies for spots and blemishes on the Skin.	p. 273
Chap. XXII. Of Remedies for Corns in the feet.	p. 274
Chap. XXIII. Of Remedies for Warts.	p. 276
Chap. XXIV. Of Remedies for Vermine.	Ibid.
Chap. XXV. Of Remedies for Kibes and Chilblanes.	p. 277
Chap. XXVI. Of Ophthalmick Medicines.	p. 279
Chap. XXVII. Of Remedies for a deafness or Noise in the Ears.	p. 284
Chap. XXVIII. Of Remedies for the Tooth Ache, and the Teeth's being set on Edge.	p. 287
Chap. XXIX. Of Remedies for Cankers in the Mouth, and the falling of the Uvula.	p. 289

SECRET

Chap. XXVI. of Rannet's Law.
 Chap. XXV. of Rannet's Law.
 Chap. XXIV. of Rannet's Law.
 Chap. XXIII. of Rannet's Law.
 Chap. XXII. of Rannet's Law.
 Chap. XXI. of Rannet's Law.
 Chap. XX. of Rannet's Law.
 Chap. XIX. of Rannet's Law.
 Chap. XVIII. of Rannet's Law.
 Chap. XVII. of Rannet's Law.
 Chap. XVI. of Rannet's Law.
 Chap. XV. of Rannet's Law.
 Chap. XIV. of Rannet's Law.
 Chap. XIII. of Rannet's Law.
 Chap. XII. of Rannet's Law.
 Chap. XI. of Rannet's Law.
 Chap. X. of Rannet's Law.
 Chap. IX. of Rannet's Law.
 Chap. VIII. of Rannet's Law.
 Chap. VII. of Rannet's Law.
 Chap. VI. of Rannet's Law.
 Chap. V. of Rannet's Law.
 Chap. IV. of Rannet's Law.
 Chap. III. of Rannet's Law.
 Chap. II. of Rannet's Law.
 Chap. I. of Rannet's Law.

A
TREATISE
OF
MEDICINES,
CONTAINING

An Explication of their Virtues, and manner of Operation.

CHAP. I.

Of Medicines in general.

MEDICINES are such things as amend the Indisposition of our Bodies. They at once preserve and retrieve a healthy State; and are not pernicious to Nature: The former Character distinguishes 'em from Food or Vi-
 ctuals, as the latter from Poyson. 'Tis true, the agreeable Softness of some Medicines, which at once remove the offensive Cause, and supply our Bodies with Nourishment; do's justly entitle 'em to the Character of *Nourishing Medicines*: And on the other hand, the Violence and Coarseness of others, which rattle and disorder the parts before they re-instate 'em in
 B their

The Definition of Medicines.

Their difference from Food and Poyson.

their natural posture, draws upon them the Imputation of *Virulent Medicines*. However, the distinguishing Character of *Food* or *nourishing things* is this; that they repair our Losses, and furnish us with Parts answerable to those that are spent: Whereas that of *Medicines* consists in altering the Dispositions of our Bodies to our Advantage. The one supposes an agreeable Conformity to our solid and liquid Parts; the other displays its Energy in thwarting and opposing 'em. The Advantage that accrues by the last, is so far from depending on their Conformity to the Parts within us, that if they shou'd happen to be melted down into the like Form, they would be equally liable to the same Disorders.

*Minerals
are proper
Medicines.*

Hence we infer, that *Mineral* Ingredients ought not to be branded as pernicious, or excluded from the number of *Internal Medicines*. Tho' their Parts cannot be melted down and assimilated to ours, as *Food* is; yet they may serve to alter or expel the Ferments that are degenerate from their natural State. Nay, Experience will vouch, that some *Mineral Preparations*, especially those of the *Evacuating Class*, are more effectual than any *Medicines* whatsoever. Thus *Mercury*, *Steel*, *Antimony*, and *Vitriol*, present us with Remedies that are not to be match'd in the *Vegetable* or *Animal Province*.

*Plants do
not evacuate
so forcibly.*

On the other hand, to do justice to the *Vegetable* Family, we must needs own, that as the *Minerals* claim a Preference upon the score of *Evacuation*, so the *Plants* have justly made their Reprisals, by affording more powerful *Alteratives*. Their Principles unite more easily with our Blood and Humors, and by consequence are admirably fitted for *Alterative Designs*; as appears by the surprising Effects of the *Jesuits Bark*, *Opium*, &c. without any sensible *Evacuation*.

But the *Alteratives* of the *Animal Family* are yet more effectual than those of the *Vegetable*. Their Principles are more of a piece with ours, and easily admitted to an intimate Conjunction with our liquid Juices. All the Preparations they undergo are not able to extinguish their Conformity; to cramp their *Alterative Capacity*; or introduce an *evacuating force*, to which they're generally strangers. Thus the *Volatil Salts*

Salts of Animals, Toads, Vipers, Caster, &c. are incomparable Remedies for many Diseases.

Medicines are either Simple or Compounded. The former are such as owe their Being to Nature, without the assistance of Art. The latter are the Result of Artificial Preparations. Some compounded Medicines are called *simple*, upon the comparison with others whose Composition is more bulky; as the simple Syrup of Suctory, the simple Electuary of Prunes, &c.

The division of Medicines.

Simples are mightily esteem'd among Physicians; and some are so mis-led by their Merit, as to reject all Compositions whatsoever. Their Plea is grounded on the friendly Bounty of Nature, which, as they pretend, has furnish'd us with *simple* Specificks for every Disease, without entrusting Man's weak Reason with the charge of Curing himself. Now, say they, 'tis an easier task to discover these Specificks, than to invent suitable Preparations.

An Objection against Preparations.

This Pretext is effectually disprov'd by Experience. We do not find that Nature has provided all things necessary for us. On the contrary, it loudly demands the assistance of our Reason for prolonging our Lives, and rendering 'em more agreeable, by a wise improvement of what it affords. Must not Bread, and Wine, and a thousand such things be prepar'd and render'd fit for use? 'Tis certain, no sensible Person will brand these things as useless, unless he have a mind to recall the primitive times, when our ancient Grandfathers drank only Water, and fed on Acorns.

The Answer.

'Tis the Preparation of Bread and Wine that entitles 'em to their respective Excellencies. The Corn must be converted into Flower, the Flower purg'd of its coarse parts, form'd into Paste with hot Water and Yest, and then duly fermented and bak'd. If 'tis not sufficiently fermented, its Parts being very compact, are neither dissolv'd nor digested in the Stomach.

The comparison of the dressing of Victuals, with the Preparation of Medicines.

Now, as our ordinary Food requires Preparation, so Med'cines stand in need of the like Qualification in order to facilitate their Passage thro' the Stomach and Guts; or at least to promote their Digestion, and pre-

vent the Pain and other Inconveniencies they are apt to occasion. Of which more Anon.

The various Classes of Medicines.

'Tis sufficient for our present purpose to divide the simple Medicines into Minerals, Vegetables, and Animals. The Minerals are properly pieces of Earth harden'd or petrify'd by acid Liquors in distinct Lays, as appears by their Veins and Joynts. Under this Head we comprehend whatever is dug out of the Ground, as being near akin to Minerals, and fit for medicinal uses. They are rank'd in four Classes; the first is allotted to Earths, the second to the oily and sulphureous Juices, whether liquid or congeal'd; the third to all the Salts that Seas or Rocks afford; and lastly, the fourth to Minerals, properly so call'd; which are again subdivided into Stones, Metals, and metalline Productions.

Earths.

The Earths are much diversify'd according as the Air or Water charges 'em with Salts, or as sulphureous Particles prevail. Thus some of 'em ferment with Acids, as Chalk and Lemnian Earth. Others do not. Some will dissolve in Water; others, especially some sorts of Clay, and the Earths whose Salts are vitrify'd, are incapable of Solution: Of this last sort are Sand, and the like, whose Principles cannot be disengag'd or fitted for use.

Oily Juices.

Among the liquid oily Juices there's none more remarkable than *Petroleum*, or Rock-Oyl, which seems to be the Basis of all Sulphureous or Bituminous Bodies, causing a diversity, according to the measure of its Purity, or its Coagulation by different Salts. It springs in large quantities from the Rocks of some Islands in the *Archipelago*. When 'tis fix'd by an Acid, or mingled with metallick Earths, it becomes *Sulphur*, and is found in the Mines adjacent to the burning Mountains. And notwithstanding its being disunited from the Marcasite or metalline Veins, by Sublimation or Distillation *per descensum*, yet it will still ferment with *Aqua fortis*; unless its earthy and acid Particles be exactly mingled by vertue of a melting Heat, by which means 'tis strip'd of the fermenting force, and styl'd the common *Brimstone*. The *Bitumens* are also diversify'd by the *Petroleum* or Rock-Oyl, according to the proportion of its Salts: If it be stinking, black, and

and bitter, 'tis simply call'd *Bitumen*; if white and light, 'tis styl'd *Naphtha*; its purple Colour christens it *Asphaltus* or *Jews Pitch*, as being chiefly found in a Lake of that name; if it be hard and well polish'd, 'tis call'd *Jete*. Amber it self is nothing else but fine Rock Oyl congeal'd by marine Salts; by Distillation it yields a clear and stinking Oyl, and a volatil Salt that does not ferment with Acids, as being (probably) fix'd by the acid of the Sea Salts. If the oily sulphureous and-inflammable Bodies be Analytically unlock'd to the last degree, they all resemble one another, as being equally compos'd of a light Earth, Water, and a nitrous volatil Salt.

The third Class presents us with the mineral Salts, which generally consist of an Acid mix'd with earthy Particles. Such are common Salt, Sal-Gem, Nitre, Allum, Vitriol, the *Egyptian Natrium*, *Sal-Armoniac*, &c. Mineral Salts.

Common Salt is at once impregnated with an Alkali and an Acid: By vertue of the former it ferments with the Spirit of Vitriol; by means of the latter, which is more plentiful, its lowermost Crystals ferment with the Solution of the fix'd Salt of Tartar.

Sal-Gem seems to possess a larger share of Alkalies, by reason that it precipitates the Solution of Sublimat Mercury, and Tinctures the Solution of Vitriol with a yellow Colour, with which it combines in the form of Crystals.

Nitre or *Salt-Petre* being calcin'd with the Powder of coal becomes a fix'd Alkali; and by Distillation yields an acid Spirit. When both these Productions are joyn'd together, they revive the Nitre. 'Tis drawn by a *Lixivium* from Earths expos'd for a considerable space to the Air; so that it consists of the Alkali of Stones, and the volatil Acid of the Air. But its fermenting with the Spirit of Vitriol, and agreeable mixing with *Sal-Armoniac*, argue the alliance of the volatil Acid to an Alkali.

Rock-Allum is the effect of a strict Union betwixt the Alkali of Stones, and a strong Acid like that of Sulphur or Vitriol. This account is confirm'd by its Chymical *Analysis*, and the near resemblance of an artificial sort, made by pouring the Spirit of Sulphur

or Vitriol upon Chalk, straining the whole, mixing it with Water, and reducing it to Crytals.

Vitriol is a Composition of metallick Earth, mix'd with an acid Spirit like that of Sulphur. The various Metals which interchangeably enter into its Composition, occasion its Diversity. For the most part it partakes of Iron or Copper. There are three sorts of it, namely, the *white*, the *green*, and the *blue*. The *green* possesses a large quantity of Iron; the *blue* has more of Copper. 'Tis remark'd that the volatil Spirit of Harts-horn do's scarcely disturb the *green* or *white*, but ferments notably with the *Roman* Vitriol.

The *Egyptian Natrum* is a proper *Alkali* Salt that ferments with all sorts of Acids, 'Tis a mixture of Nitre and a light Earth; the former being calcin'd by the Sun or subterraneous Sulphur.

The natural *Sal-Armoniac* took its rise from the Urines of Animals mix'd with earthy Particles. The artificial, now in use, is a composition of Urine, Soot, and common Salt. It partakes of an Acid and volatil Alkali. Thus any Acid Spirit pour'd upon volatil Salts produces a sort of *Sal-Armoniac*: And the acid Spirit of the Air meeting with a fit subject will breed the like Composition. Nay, some are induc'd by several Experiments to believe, that the principal Salt dispers'd through the Air approaches nearer to the Nature of *Sal-Armoniac*, than any other whatsoever.

The difference betwixt fix'd and volatil Salts is occasion'd by the variety of their Compositions. Thus several volatil things mingled together produce a fix'd Body; and on the other hand, volatil Compositions spring from fix'd Ingredients.

We proceed to the fourth Class, containing Minerals properly so call'd; viz. Stones, Metals, and Marcasites or metallick Productions.

Stones.

Stones are hard unmallicable Bodies, which Water cannot dissolve, nor Fire melt by themselves: so that 'tis equally difficult to unlock their Frame, or trace out their first Principles. However, Reason informs us that they are of different Moulds. Some are transparent, as Crystal and Diamonds; others present us with

with lively Colours ; and the common sort of Stones differ from either. Those of a transparent Character seem to be form'd of some liquid Matter, for we find generally that Transparency cannot be ascrib'd to any Bodies, but such as either are or have been liquid : Besides, liquid Bodies are only capable of assuming regular Forms, as appears by squeezing or pinching 'em on any side ; and the comparative obscurity of some parts of pellucid Stones cannot be otherwise accounted for, than by charging it upon the foreign Particles that have insinuated themselves during their liquid State.

Perhaps 'tis upon this account that Emeralds and colour'd Stones are generally found in Silver, Copper, or metallick Mines ; and Diamonds or Rubies oftentimes assume strange Colours. However the Rock-Crystal cannot with any likelihood be said to consist of Water thicken'd and frozen up, by the virtue of nitrous Salts : For that sort of Crystal is much heavier than Water, and is generally bred in hot places. And indeed all colour'd Stones are, for the most part, heavier than others that are transparent, by reason of their mineral Alloy.

However 'tis certain, that Stones afford a great many useful Medicines. Lime (which is a Stone calcin'd) furnishes us with several effectual Remedies : The Azure Stone is an admirable Alkali, which ferments with the Spirit of Nitre or Vitriol ; and probably upon that account was recommended by the Ancients against Hypochondriac Distempers. Indeed, I must needs own, that some ridiculous effects are attributed to some Stones, which are only owing to the Credulity or Disingenuity of those that sell 'em. I presume that no one acquainted with Physicks, will credit the pretended Efficacy of the Eagle Stone, in causing or preventing Abortion according as 'tis hung on the Neck or the Thigh ; or the unaccountable vertue of the Nephritick Stone in curing the Gravel. Were these Vertues true, they'd be infinitely more wonderful than those of the Loadstone.

A Metal is a sort of malleable Mineral, that melts upon the Fire, but so as to re-assume its former Nature and Consistence, after 'tis remov'd from thence.

Metals.

Thus 'tis distinguish'd from Antimony, Arsenick, and such other Minerals as yield not to the Hammer, and when melted lose their primitive Form. We generally reckon up seven sorts of Metals, *viz.* Gold, Silver, Copper, Tin, Iron, Lead, and Mercury: But Mercury is a Liquor that cannot stand the Test of Fire or Anvil; nor is it properly either a Metal or Mineral, 'till it be fix'd by Acids, or reduc'd to a natural or artificial Cinnabar; in which cases 'tis properly styl'd a Mineral.

The Marcasites or mineral Earths, are such Productions as partake of some prevailing Metal, interlac'd with Stones or Earth. For the most part, their Pores are more open than those of Metals.

The various degrees of the wideness of the Pores of Metals, occasion a variety in the measure of their Fermentation with Acids, tho' at the same time their Vertues are not much different. Thus Quicksilver, tho' it do's not ferment with the Spirit of Sulphur or Vitriol, yet it do's with that of Nitre; not as if it was an Acid encountering the nitrous Alkali, that is not found in the other Spirits; but because the Spirit of Nitre and Sulphur are two different Acids whose Parts are unequally dilated, that bear an unequal Proportion to its Pores. In like manner, a Vein of Lead ferments with the Spirit of Nitre, but not with that of Vitriol. And on the other hand Lead it self is subject to the Influence of the Spirit of Vitriol, while that of Nitre is of no force. The reason of such Accidents is this, The Parts of the Vein or Mineral are more or less dilated than those of the Metal: Perhaps the Alloy of foreign Particles, or some peculiar disposition in the Parts, occasions their unequal wideness. Thus we see there is no necessity of making the one an Acid and the other an Alkali, notwithstanding the variety of their Fermentations.

The *Vegetables*, or *Plants*, are a sort of Substances that are fastned in the Earth, rising above its Surface, and improving their Growth by the Distillation of a Juice within their Fibres. *Theophrastus*, and almost all the Physicians after him, have drawn 'em up into four Ranks. The first are Herbs, which shoot forth Leaves immediately from the Roots, as Sorrel: The
second

second (according to *Julius Scaliger*) presents us first with a Trunk or Stalk, and then with Leaves, as Coleworts: The third may be call'd Shrubs, as bringing forth hard Branches immediately from the Root: The fourth are Trees, or such Plants as first send forth from the Root a woody Trunk, and afterwards Branches, as an Oak: To these we may add a fifth, containing Mushrooms, and coated or round-headed Plants.

Although the different Parts of Trees and Herbs are obvious, and universally known; yet by reason of their various Uses, we shall not grudge to accommodate the Reader with a brief Description of them. *The Parts of Plants.*

In Plants we observe these Parts; the Root, the Stalk or Trunk, the Branches, which before their spreading are call'd Buds, and when they grow after they're lop'd are styl'd Shoots or young Twigs; besides Leaves, Flowers, Fruit, and Seeds; to which we may add the Rinds, Wood, Gums, Rosins, Juices, Drops, Mistletoes, Mosses, Mushrooms, and Fibræ.

Flowers may be distinguish'd from their Foot-stalks, Cups, &c. and may be us'd either with or without 'em; but since variety of Parts has no immediate tendency to improve our knowledge of their Vertues, we shall take no further notice of their Descriptions, nor of the Organs that serve to convey their Nourishment. Those who desire to be thoroughly acquainted with these matters, may consult *Malpighius*, *Tournefort*, and many others.

The Principles and Vertues of all the Parts of a Plant, are not always alike. Thus the Roots, Stalks, or Trunk of a Plant distill'd thro' a Retort, yield a great deal of acid, tho' little or no volatil Salts: They likewise afford some volatil Oyl, tho' not near so much as the Rinds. The Leaves furnish us with volatil Salts and aromattick Oyls; but the quantity of their Acid is much short of that of the Trunk or Roots. In like manner, the Juice or soft Parts part with their volatil Salts much more readily than the woody Parts, which are only the continuation of the Foot-stalks. Probably the Principles of the former are more unloose'd and dis-united by vertue of the Fermentation, and

and less imbarraſs'd by an Acid, than thoſe of the latter.

The Seeds moſtly abound with Oyls, and urinous and volatil Salts, which ſometimes uſher in, and ſometimes follow their acid Spirits.

The watry Fruits are generally charg'd with acid Liquors, for the moſt part void of all volatil or alkaline Salts. The Flowers are plentifully ſtock'd with volatil Oyls, and if they're high ſcented with volatil Salts: But at the ſame time they partake of ſome acid Particles.

The Roſins contain Oyls and acid Particles, as appears by Mr. *Grew's* artificial contrivance of pouring, by drops, the Oyl of Vitriol upon the Oyl of Aniſeed. The Gums ſeem to conſiſt of Oily Juices, congeal'd by ſaline or earthy Alkalies. Thus we ſee, that 'tis generally an Alkali that qualifies an Oyl for diſſolving in Water.

Some Naturaliſts have thrown ſome Plants into the rank of Animals. The motive they go upon, is the Example of the Sensitive Plant, which is an inſignificant Proof, as alſo *Joſephus's* fabulous Deſcription of the Plant *Bara*.

Animals.

Animals are Subſtances entitled to Motion, either by virtue of the Influence of external Objects, or an internal thinking Principle. The Character which differences 'em from Plants is this, that they are not redder'd down to one particular place of the Earth; or at leaſt, that they enjoy a Liberty of moving ſome of their Parts at pleaſure, or as they have occaſion. They are divided into the rational and irrational kinds. The laſt of the two is drawn up under four Heads; namely, the creeping, ſwimming, four-footed, and flying Creatures.

The parts of Animals generally us'd in Phyſick, are the Bones, Fleſh, Fat, Marrow, and the principal Viſcera; the various Excrements, namely, Hair, Horns, Claws, Moſs, &c. the nourishing Liquors, viz. Choler, Blood, Milk, &c. Thus the Lungs of a Fox are recommended for the Phthiſick, the Guts of a Wolf for the Collick, Man's Skull for the Falling-Sickneſs, the Blood of a Goat for the Gravel, the
Teeth

Teeth of a wild Boar and the Joints of a Hart for the Pleurisie, &c.

Since the various Parts of Animals give different Tastes, and require differing measures of Digestion, we may reasonably conclude the difference of their elementary Principles. Altho' they're all plentifully laden with volatil Salts and Oyl, which are embarrassed by very few acid or fix'd Salts, yet they're not in all Circumstances equal. The volatil or sulphureous Parts, as they're more or less active and engag'd, produce very different Effects; and the Phlegm, by its various Capacity for disuniting and scattering the Principles, may occasionally lighten or depress the Sulphur and Salts.

Thus far we have pursu'd the Divisions of Medicines, with a greater regard to Curiosity, than to Usefulness. Our next Business will be to range 'em according to the Qualities and Vertues which render 'em serviceable.

Galen, and his Voraries, measur'd their Distinctions by the first Qualities, namely, hot, cold, dry and moist. These Qualities they threw into a twofold State, *viz.* Actual and Potential: Of the former sort is the Heat of Fire, of the latter is that of Pepper. In each of these first Qualities they likewise mark'd out four Degrees.

Galen's
Opinion.

The first Degree is allotted to such Medicines as operate but faintly and obscurely. Thus, say they, the Flowers of Violets are cold in the first Degree.

1. Degree.

In the second Degree their Operation is visible. Thus, in their sense, Lettuce is cold in the second Degree.

2. Degree.

The third Degree intimates a forcible or violent Operation. Hence Water-Lillies are said to be cold in the third Degree.

3. Degree.

And lastly, in the fourth Degree their Operation is not only forcible, but in some measure prejudicial. As for instance, say they, Opium is cold in the last Degree.

4. Degree.

To each of these Degrees they assign three Steps or Periods; namely, the beginning, the middle, and the end.

All the above-mention'd Degrees of Medicines they make agree, and correspond with others of the like nature in our Temperaments. Thus, according to their contrivance, a Remedy cold in the first, will heat a Man whose Constitution is cold in the second or third Degree. It must be granted, that the contrivance of such Ideas is ingenious and entertaining enough; but no Man could yet be so happy as to put 'em in execution.

In order to examin the merits of this Opinion, we first make this Remark, namely, that the above-mention'd Qualities, *viz.* cold, hot, dry, and moist, may be look'd upon as so many mechanical Dispositions of an external Object, fitting it to excite within us the sensation of Cold, Heat, Dryness, and Moisture. And as they cannot be suppos'd to occasion such Sensations, without assigning 'em an influence upon our Organs and Liquors; so of course, they must needs be useful in Physick. Some of 'em are hot, others cold; some dry and solid, others liquid and moist. But we ought to remember, that in Physick we only mind their intrinsic potential Qualities. Some Medicines, tho' they do not directly occasion the Sensation of the Qualities they're entitled to, yet they cause such Motions in the Liquors of the Body, as are reckon'd parallel to those, which the others that are actually hot, cold, &c. are wont to present to our Senses. Thus we see, that this Opinion is embarrass'd with a double *Entendre*, and in following it we are liable to interchangeable mistakes. However, to set it off to the best advantage, I grant that the discovery of such Medicines as are liable to work up our Humors into hot, cold, dry, or moist Dispositions, that is, such as promote or retard the motion of the Blood, and assemble or disperse its Salts; I say, the discovery of such Medicines is a very serviceable Expedient. But, I doubt it cannot be compass'd but by Experience. What is it that gives me to know that Violets, Lettuce, or Opium it self, are cold? Is it not the Experience of their Vertue in abating the Heat of Feavers? And upon this Supposal is not this consequence, namely, that in Feavers such and such Medicines are serviceable to abate the Heat of Feavers; I say, is not this Consequence
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more natural and easy than that of *Galen's*, viz. that such and such Medicines are cold? Who can determine, that their Efficacy in Feavers is the direct result of their cold Quality? Or, how can we range all Medicines under these Heads, while we cannot single out the cold from the hot, nor the dry from the moist?

Upon these accounts, *Hippocrates*, in his Book de *Veteri Medicina*, says, That we ought to take our Measures from somewhat else, besides the Heat or Cold that attend Diseases: For, says he, 'tis neither the Heat alone, nor the Cold alone, that makes a Man sick; but there are in Man some bitter, some saltish, some sweet, some sharp, some tart, and several other things which require our particular Consideration. Thus the same thing that in one sense is hot, in another sense is cooling.

Hippocrates his Opinion.

Wherefore we chuse to regulate the divisions of Medicines by their sensible, perceivable, or second Qualities: As for instance, some are rough, others smooth; some smell very strong, others more agreeably, and a third sort give no smell at all; some are bitter, some sower, some acid, &c.

The Divisions of Medicines.

The Division may be still carry'd on thus. Some abound with spirituous Parts, some with Sulphur, some with Salt, some with Phlegm, and some with Earth.

But the most important Divisions are those taken from their specifical Qualities; which the Ancients styl'd the third and occult Qualities, because they fancy'd 'em inexplicable, and found themselves altogether oblig'd to Experience or Chance for their Discovery. Without their Instruction, says *Galen*, who could have divin'd that Jasper stops Bleeding, and the Ashes of Crabs cure Madnes? But I shall endeavour to make it appear, that tho' the Vertues of some Specificks were only discover'd by these means, yet all are not subject to the same Fate; and that therefore 'tis unreasonable to decry the use of Philosophical Reasons in Physic, which we find so serviceable in directing us to a discreet application of the Medicines already known.

C H A P. II.

*Of the choice of Medicines, and the way of
discovering their Vertues.*

*What is
most consi-
derable in
Medicines.
Their choice.*

IN treating of Medicines we are to consider the manner of chusing, preparing, and compounding 'em. The Choice is determin'd by the circumstances of the time when they're gather'd, the Country or Place they grow in, and their sensible Qualities.

Medicines ought to be gather'd when their Vertue is rankest; but the particular Period when that happens, is not easily fix'd upon. The Roots seem to be equally good at all times, notwithstanding *Dioscorides* his Partiality for the Autumn. The Stalks are best when they're come to their full growth, before the Plants bring forth Seeds. The Leaves ought to be gather'd a short time before their Fall, because then their Juice undergoes a sort of Fermentation. The Seeds ought to be dry; the Flowers spread; the Fruit mellow; and the Juices taken while the Stalk and Leaves are breaking forth. Sometimes Medicines are alter'd and corrupted by lying too long after they're gather'd. In general, Flowers and Leaves cannot last above a Year, notwithstanding their being dri'd. The Roots, Woods, and Rinds, being of a compact and hard Substance, may continue good several Years. In the mean while 'tis observable, that the Roots, whose Parts are loose and diluted with Moisture, such as *Satyrium* and *Asarabacca*, will lose their Vertue in a Years time: And on the other side, some compact Leaves, such as *Savin* and *Cypress* Leaves, will hold their Strength many Years.

In chusing proper Medicines, we must likewise have regard to the Country or Place in which they grow. Some Plants are venomous in one Climate, and serviceable in another. In *Persia* an Apricock is Poyson, and in *Piedmont* it self 'tis not wholesome. 'Tis universally known and acknowledg'd, that Herbs growing in Fens and marshy Places, or not expos'd to the free Air, are not so wholesome as others. 'Twere an
infinite

infinite and useles Labour to recount all the different Countries, where the Vertues of Medicines vary. For foreign Drugs, we must, in a great measure, refer our selves to faithful Druggists. The apparent Qualities, namely, the Colour, Taste, Smell, Weight, Hardness, and even the Sound of Medicines, are also of use to direct us in the Choice: But 'tis impossible to comprise 'em within general Rules. We must confide in such Authoits as have purposely wrote upon that Subject.

As for the manner of tracing the Vertues of Medicines, we shall put the case, that a Man, who is altogether unacquainted with 'em, would by himself try to find out their Qualities. In order to compass his end he must have recourse to Reason and Experience, seasoning the one with the other. Reason is a feeble Instrument, unless supported by Experience. And I may safely say, that 'tis impossible to lay open the Vertue of any Medicine, without joyning it to other things. Our Soul is too narrow and confin'd, to reach the knowledge of things by their Causes; since 'tis only by the Effects that we form any judgment of the Causes.

*The manner
of tracing
their Ver-
tues.*

Hence we conclude the necessity of Experience, and its happy conjunction with Reason, as being the only proper Means for carrying on the Discovery. 'Tis chiefly to Experience that we owe the discovery of many Purgatives, Narcotics, *Febrifuga's*, and almost all the Specificks. And when we attempt to compass that end by Reason, we see our selves frequently disappointed in our Expectations.

When we reason upon Experiments we are liable to Mistakes; for tho' an approved Remedy may have Parts resembling those of another, yet we cannot infer, that both of 'em will produce equal effects; for so much as their active force is oftentimes lodg'd in the distinguishing Particles, and not in the common ones. And sometimes a Composition will produce Effects quite different from those of its separate Parts.

However, since Experience oftentimes would come too late, a Physician is sometimes oblig'd to employ his Reason. As for instance, I know that all bitter Medicines are proper for killing the Worms; and at

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the same time being in want of the approved Remedies; I meet with a bitter Medicine, and conclude that probably it may have the same Effects with the known Specifics; and therefore give it for the same purpose; specially if I know by other occasions that 'tis innocent and safe.

Experience thus join'd to Reason, may display it self three ways, 1. By an Analysis. 2. By mingling Remedies with the Liquors of our Bodies. 3. By the sensible Qualities, styl'd by the Ancients the *Second Qualities*.

The Analysis or Resolution unfolds the Principles of the compounded Body. Now Reason and Experience teach us, that subtile Parts are apt to put the Blood and Humors in motion; that the coarser Parts put a stop to their Rapidity; that lixivious Salts hinder the Blood to curdle; that acid and essential Salts fix it; and that Sulphur tempers and smooths the sharp Particles. Accordingly, when the resolution of a Plant gives us to understand, that 'tis compounded of such and such Particles, we conclude, tho' with no great certainty, that it is possess'd of such and such Vertues.

Objection. It may be objected; that Fire, in resolving the Body, destroys and transforms most of its Principles; that its violence entitles essential Salts to a lixivious Character, as it produces 'em in Earths by a violent Calcination; and turns Nitre, which is an acid, to a fix'd Alkali; it being held upon the Fire a long time, and then mix'd with the Powder of Coal.

Answer. For answer, I confess 'tis a difficult business to prove that Alkaline Salts are not the effect of Fire, because Nature affords none such, excepting *Natrum*, and all the artificial ones are produc'd by a violent Fire. But, at the same time, we may reasonably believe that the Sea-Salt, Nitre, &c. are certainly Alkaline Salts mingled with Acids: because, if we pour the Spirit of Salt upon the Salt of Tartar, they present us with a true Sea-Salt. Hence we conclude that Alkaline Salts are rather the Result of the unfolding of the Body. But, granting the Alkaline Salts are the Product of the Fire, yet they are still useful Remedies; and besides, the same Fire serves to unlock the Acid Salts, which cannot be reckon'd its Product.

Nay,

Nay, supposing the Alkaline Salts were wholly attributed to the Fire, there are other Principles behind which it claims no right to. Plants are certainly stock'd of themselves with Essential Salts; because, if we let their Juice stand in a Cold place, we meet with an Essential Salt sticking to the Sides of the Vessel in small Crystals; and Almonds, Nuts, &c. are visibly possess'd of an Oyl that may be extract'd without Fire.

Others endeavour to lessen the Credit of the Analysis, by alledging, That the Principles of the Jesuit's Bark, Opium, Senna, &c. disunit'd by Fire, are strip'd of the Vertues of their Respective Originals. Those of the Bark, say they, are of no use in Fevers, those of Opium are not Narcotic, and those of Senna do not Purge. *Objection.*

For Answer. I own, the Vertue of several Medicines is owing to the Conjunction of their Principles: But there are others, whose Vertues are lodg'd only in one Principle. And therefore, having observ'd that Odoriferous Plants yield much Sulphur, and that some Parts of Animals afford large Quantities of Volatil Salts, I would conclude, (upon these single Principles) That they promote the Insensible Transpiration. But in judging of those Medicines, whose Vertues depend on the Mixture of their Principles, our Reason must help out our Senses. Thus I would Reason of Opium; That it is compounded of a Rosinous and Spirituous, mix'd with an Earthy and Gummy Part; That the latter being buoy'd up by the former, fixes and arrests the Spirits, interrupts their Motion, and perhaps stops some Branches of the Nerves of the Brain. Now the Gummy Particles taken apart cannot bear up to the Spirits; and, on the other hand, the Spirituous Particles in a Separate State are not capable to fix 'em; and, by consequence the Separate Parts cannot enjoy the Vertue that attends the Composition. 'Tis true indeed, we cannot alledge such Particular Reasons for the Failure of the Principles of Purgatives and Febrifuges; but tho' the Analysis should be lame on that score, it ought not to be totally rejected as useless. *Answer.*

Objection.

The Third Objection against the use of Resolutions is this. Some parts of the Vessel will necessarily mix with the Dissolv'd Medicine, and so Adulterate its Principles.

Answer.

I Answer, The number of the Particles flying from an Earthen or Glass Vessel is so small, that it cannot alter the Vertue of the Medicine. 'Tis true, that a Vessel of Copper, or of any acid Metal, may introduce a Foreign and Noxious Tincture; but, if due Precaution is us'd, that may be prevented.

C H A P. III.

An Enquiry into the other Ways of Discovering the Vertues of Medicines.

THE Analysis or Resolution, which is the first way of joyning Reason to Experience, does not unfold all the Principles of the mix'd Bodies: For there are still some behind that neither Taste, Smell, nor Consistence can discover. To bring these hidden Principles to Light, and render 'em sensible, several Experiments have been contriv'd, and frequently put in Execution by our Royal Society.

The first Remark to this purpose is this. Acids make the Solution of Turnesol grow red: 'Tis an Observation that always holds. And if any Liquor gives it a light Tincture, while the Taste is faint and obscure; 'tis observable that afterwards as the Taste improves, so the Colour is heighten'd.

The Second is this. Volatil Salts give a white Colour to the Solution of the Sublimate Corrosive, whereas fix'd Alkali's make it yellowish or reddish. They mortifie the Acid by which the Mercury was dissolv'd, and cause various Precipitations, and sometimes Coagulations, according to the different Force and Spirits of the Salts employ'd for that purpose.

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The Third runs thus: Saline Salts, that is, such as are near akin to Sea-salt, make the Solution of the Sugar of Lead White. There are many Distill'd Waters which cannot produce that Effect, tho' at the same time they weaken the force of the Vinegar as effectually as common Water. And yet common Water, by reason of the small quantity of Sea-salt contain'd in it, will give the White Colour. And upon the same account Well-water whitens more effectually than that of a Pool.

To these we joyn a Fourth; namely, That mix'd Salts give a reddish Colour to the Solution of German Vitriol.

Our next business will be to touch upon such Experiments as result from the mixture of Remedies with Blood, Lymph, Gall, or Milk.

In the First place, it affords us this Rule; *viz. A General Rule.* That fix'd Alkali Salts dissolve and put in motion all the Liquors of our Body, and that Acid Salts cramp and disturb their motion. The former dis-unite and set a float the Sulphurous parts, with which all our Humours are richly Stock'd; and perhaps are the better qualify'd for that Office, for the Fire lock'd up within 'em. On the contrary, the Acid Salts gather and unite the Sulphurous Clots, and so Embarrass the Passages, and put a stop to the Motion.

The Volatil Salts and Spirituous Particles of Medi- *The Influence of Medicines upon the Humours.* cines are apt to put the Liquors in Motion; by reason of their own propensity to move, and the fermentation they raise among the coarse Particles. Coarse Sulphureous Medicines clogg the Humours, but subtiler Sulphurs being easily agitated by the Spirituous parts are apt to promote their Motion.

Some disapprove of this Method of mixing Medicines with Liquors of Animals, by objecting, *Objection,* that the Liquors taken from the Body are not in the same Condition as when they were actually part of it. Thus, say they, the Spirit of Wine, which is a subtiler Sulphur, quickens the Motion of the Blood and Humours of Living Persons; but after Death it congeals the Blood, Lymph and Gall. In like manner, continue they, both it

An Enquiry into the other ways of Part I.

and other Medicines will produce different, nay contrary, Effects upon the same Liquor, with respect to its different State, as being within the Body, or taken from it.

Answer.

For Answer. I Grant that Medicines influence the Humours of Living Persons, at a different rate from those of the Dead: But still this their various influence may furnish us with useful Experiments. Besides, Oyl of Vitriol do's equally fix the Blood and Liquors of Living and Dead Animals. And as for Spirit of Wine, it fixes the Blood and Bile indirectly, by carrying their Motion too high, and so consuming their subtile Particles, and giving the Acid of the Air an easie admission. Moreover, 'tis probable, that Spirit of Wine may contain an Acid. Mr. *Tournefort* shew'd me the Experiment of its making Blew Paper Red, while 'twas a drying, that is, while its volatil Oyl disperfed it self.

Objection.

A Second Objection may be form'd thus. The same Juices within our Bodies give different Impressions to the Venous and Arterious Blood.

Answer.

I Answer, The Consequence is naught: Medicines are alter'd in our Mouth and Stomach, and therefore their Operation within the Body cannot in every respect be a just Precedent for what they produce without it. Besides, we have no occasion to trouble our selves about their influence upon the Arterious Blood; since their first reception is in the Veins.

Having thus obviated the Objections that might discountenance the Undertaking, I proceed to make some Essay. The Influence of the Principles of Medicines upon the Blood, Lymph Choler, &c. being already hinted at; my business at present shall be confin'd to the compounded mix'd Bodies.

Those which abound with Volatil parts, such as Sage, Mint, Baum, &c. afford us Juices, that being mix'd with Blood or Milk, occasion no change whatsoever, but continue their Fluidity.

Plants richly indow'd with Essential and Acid Salts, such as Sorrel, Woodforrel, Juice of Citrons, &c. Fix Gall,

Gall, Lymph, Blood and Milk, and separate the Whey from the Curd of the latter two.

Plants furnished with fix'd and Acid Salts loaded with gross Sulphur, such as Wolfs-bane, Crowfoot, &c. present us with Juices, that sink the Natural Consistence and Colour of Blood, and invest it with new ones.

Medicines containing Acids hem'd in by Alkali Salts, do not fix Blood, Milk, nor Gall. Thus Nitre, Sea-salt, &c. serve to preserve their Liquidity, and prevent the separation of their Principles. For all these Liquors are compos'd of Phlegm and Oyl, which never combine together without the Interposal of Salts. Just as Water will not mix with Oyl, without some Salt be added to it. No wonder then, that the Salts keeping the Principles at due distance, preserve their liquid State. Perhaps, some may deny that Nitre, Sea-salt, Sal Armoniac, &c. are a mixture of Acid and Alkaline Salts; as if the latter were only the product of Fire. But the artificial Composition of Salts of that Nature makes good the Assertion. Since the Acid Spirit of Nitre mix'd with the Alkaline Salt of Tartar, becomes a true Nitre; and the Spirit of Salt mix'd with the same Alkali yields Sea-salt; now these are plainly compounded of Acids and Alkali's.

We are now come up to the second Qualities, which, as I intimated before, are serviceable to point out the Vertues of Medicines. 'Tis true, the Weight or Lightness, Hardness or Softness, are of no great use. But the Taste or Smell are very serviceable to this purpose.

The various Tastes, whether Bitter, Soure, Sharp, Saltish, Urinous, Sulphurous, Oily, &c. I say these various Tastes direct us how to rank Medicines into several Classes. Reason informs me at first view, That insipid and Oily Medicines can only Sweeten and Moderate the Acrimony and irregular motions of our Humours. Here I conclude Oyl is proper for Indispositions where Smoothness and Temper is wanting; The Cold Seeds are proper where the Humours require to be qualify'd and thicken'd. All o-

ther Tastes are the Product of Salts. The Acid springs from Essential Salts, the tart and sharp from Alkali's; the saltish Taste partakes of both; and the bitter has more of the last. Thus we may reasonably account for the several Properties of different Tastes.

The Sense of Smelling furnishes us with several useful Discoveries relating to the Vertues of Plants. By it we discern, if the Medicine be laden with Sulphur, whether Volatile, or Earthly. Thus we are taught, that all Odoriferous things are good for the Brain and Nerves; because they are largely stor'd with a volatil Sulphur, capable to overtake and fix the volatil Salts that unrip their Texture.

The Superficial Appearance of Plants affords no solid Instruction. For several Plants of the same Colour have different Vertues. Nay, the Colour of the Juices is also fallacious. Thus Scammony and Poppies yield White Juices; and yet the former promotes, and the latter hinders Purgation.

Those who are in any measure acquainted with Physicks will easily perceive, that the External view of a Plant is no Rule for its Vertues. 'Tis true, Liverwort, Lungwort, and Woodforrel, bear the Image of the Parts that profit by their Vertues; but 'tis well known there are others more beneficial to the same parts, that carry no External Resemblance of 'em.

C H A P. IV.

Of the Analysis, or Resolution of Medicines.

IN Order to the Analysis, or unfolding of the Principles of any mix'd Body, we put it into an Earthen or Glass Retort, fitted to a Recipient. At first we give it a gentle Fire, so that it scarce feels Hot, This Fire we continue till it give over running, and reserve the Liquor apart. Afterwards we Augment the Fire several times, and shift, or empty the Receiver upon every Augmentation. When the Fire is heighten'd to the last Degree, and the running is over, we take the Remainder out of the Retort, Calcine it into Ashes, and by a Lixivium and Filtration Extract a Salt.

Generally we fetch five Principles from all Bodies ; some of which are Active, some Passive.

The Active are these three. The Spirit, the Sulphur or Oyl, and the Salt. The Passive are two. Namely, the *Caput mortuum*, and Phlegm.

The Spirit, if it be very Volatil, comes first over ; But if fix'd, it follows the Phlegm. Properly speaking, the volatil Spirits are but a Solution of volatil Salts in a small quantity of Phlegm. The Acid Spirits are a Solution of Acid Salts in the same Liquor. The hot burning Spirits are a mixture of Sulphur and very volatil Acids in a little Phlegm.

The volatil Sulphur follows the Spirits, and the coarser sort comes next to the volatil Salts. By Sulphur we mean all the hooking, entangling parts of the mix'd Body, especially such as flame upon the Fire. They are fix'd and assembled by Acid, and rarify'd and dis-united by Lixivious Salts.

Besides this volatil and coarse Sulphur, we meet with another sort call'd Ardent Spirits, that are so Incorporated

corporated with the Salts and Phlegm, that they mix easily with watery Liquors. They are call'd Ardent Spirits, and consist of a coarse Sulphur exalted by the Fermentation which the Juice underwent.

All Sulphurs, whether volatil or fix'd, are reducible to a light Earth, Phlegm, and Salt. Thus we see 'tis only the different ranging of the Principles that causes their variety. If we repeat the Distillation of common Water upon Fetid Oyls, the Oyl loses much of its stink, and somewhat of the weight; and the Water is Tinctur'd with a volatil Alkali, as appears by its whitening the Solution of Sublimate Corrosive.

We may reasonably Conjecture that the Aromatick, or Express'd Oyls are plentifully stor'd with Acid Salts. For we find that when they're put into Digestion with volatil Salts, and the volatil Salts are afterwards sublim'd, they're strip'd of their noysome Smell. Besides, they melt difficultly in the Air, and so do Oyls mix'd with Acid Spirits.

There are three sorts of Salts. Namely, the Essential, Lixivious, and Volatil kinds.

The Essential is taken from the express'd Juice of the Plant, Purify'd, and set in a Cellar to run into Crystals.

The Lixivious is Extracted by burning the Plant, making a Lye with its Ashes, then Filtrating, and gradually Evaporating the same. There are Two kinds of 'em. The First is simply call'd Lixivious. It Tastes like Salt of Tartar, melts in the Air, and makes a Yellow, or Red Precipitat of the Solution of Mercury. The other sort are call'd Saltish. They leave a Mucilage in the Lye while it Evaporates, they melt with difficulty in the Air, and have no precipitating Influence upon the Solution of Sublimat Corrosive. In Taste they resemble Sea-salt. Some of 'em indeed incline to an Acid Taste. Such is the Acid Salt of Swallow-wort.

'Tis a common Observation, that the first Crystals of saltish Salts approach to the Nature of Alkali's; but the latter are quite Acid, and accordingly

ingly congeal the Oyl of Tartar. Whereas the first Cryftals of fimple Lixivious Salts partake lefs of the Alkali, and fcarce difturb the Solution of Sublimat Corrofive; but the latter are remarkable for the contrary Effect.

The Volatil Salts are rais'd by Diffillation. They faften upon the Neck of the Veffel, efpecially if it be large. We draw large quantities of 'em from the parts of Animals.

Volatil Salts are of two forts. The one are fimplly fo call'd, and partake of a Volatil Sulphur. They render the Solution of the Sublimat muddy. They ferment with Acids; and, in a word, are plain Alkali's.

The other may be ftyl'd Saltifh Volatil Salts. They are impregnated with an Acid, and ferment with nothing of that Nature. They do not melt in the Air, nor is their Taffe fo unpleafant as that of the fuphureous kind. I take the Volatil Salt of Amber to be of this fort.

The Phlegm has no Vertue beyond that of common Water, and therefore is commonly thrown away as ufelefs. It ferves only for a Vehicle to the other diffolv'd Principles. And when the Salts are diffolv'd in it, enforces their Operation. Hence the common Saying; *Salia non agunt, nifi diffoluta*. For Salts are a fort of keen Particles, that work moft effectually when put into Motion by the Phlegm: But at the fame time their Parts muft not be over-diluted and dif-joyn'd in the Watry Vehicle, otherwife their Force is impair'd.

The *Caput Mortuum* is not entitled to any Aftive Force, as being only a Porous Subftance difpoffefs'd of the Principles it formerly contain'd.

The above-mention'd Principles are not met with in Metals, nor in fome Minerals. As for the Salts attributed to Lead, Steel, Pearl, and Coral; they're only fome Foreign Acid Salts that have congeal'd fome parts of the refpective Subftance; and thefe Parts may be re-inftated in their Natural Condition, by expelling the Foreign Intruder that disguis'd 'em.

Seeds and Juices scarce afford any Volatil Salt or Ardent Spirit, unless they be fermented. And hence we draw a convincing Proof, That Volatil Salts of Plants are not the Product of Fire, since the strongest Fire imaginable can fetch none from their Seeds or Fruits, unless fermented. Nay, Fire cannot Volatilize or Fix an Essential Salt, without Fermentation be included under that Name, as being a sort of *Ignis Mollis*, or the Natural Fire employ'd by Nature to exalt the Salts and Sulphur of our Humours. Besides, there are some Volatil Salts drawn from Plants by Vertue of Fermentation alone without Fire, such as that of Woad.

As for Alkali Salts, the following Experiment will evince that they do not owe their Being to Fire. 'Twas communicated to the College of Physicians at *Paris*, by Dr. *Vieussens* at *Montpelier*.

Take Fifty Pounds of Man's Blood, Dry and Calcine it in a Potter's Oven, during the space of 24 Hours, and there will remain about Three Ounces, Seven Drams, of an Alkaline Powder that ferments with Acids, and gives a green Tincture to the Tincture of Mallows, or any other Sulphureous Liquor. By a Lixivium ye may extract from it an Ounce of White Fix'd Salt that ferments with all Acids, precipitates the Sublimate Corrosive, and tinctures the Syrup of Violets with a green Colour. The Author says, He took of it Seven Drams and Forty Two Grains, and mix'd 'em with three Ounces of the Dryest Bolus Armoniac. From this Mixture on a Reverberatory Fire he drew half an Ounce and eighteen Grains of a Spirit, in Colour resembling that of Sulphur, and in Taste surpassing the Acidity of the Spirit of Vinegar. This Spirit, he says, fermented with the Oyl and Fix'd Salt of Tartar, and likewise with the Fix'd and Volatil Salts, and with reddish Spirit of Blood; it Tinctur'd the Syrup of Violets and Turnesel, and the Tincture of Mallows, with a red Colour. From hence he concludes the Salt of the Blood to be a Saltish Salt partaking both of Sharpness and Acidity. He adds, That from what remain'd in the Retort, he extracted by a Lixivium two Drams and a half of a greyish white Fix'd Salt, which fermented with

with no Acids, except the Oyl of Vitriol ; but precipitated the Sublimat Corrosive, and gave a green Colour to Sulphureous Tinctures.

Now this Experiment is a Convincing Proof, That the Fire is so far from turning Acid or Saline Salts into Alkali's, that it frequently disingages the Acid from the Alkali, or rather produces an Acid, which presents us with Effects equal to those of the most violent Acids. Thus Mercury, calcin'd by different Sublimations by it self in a close Philosophical Vessel, becomes a red Powder, in Colour, Taste, and all other Effects, resembling the common red Precipitat. Wherefore I suspect that these long Calcinations alter the Body of the Mercury ; that is, That the Fire furnishes the Acid that joyns the Calcin'd Matter : And upon that Account Mr. *Vienfens* his Experiment does not prove that the Acid was formerly existent in the Blood. Besides, the Consequences he fetches from his Experiment may likewise be call'd in question upon this score, namely, That so large a quantity of Blood as he orders to be calcin'd, must needs contain a great deal of Sea Salt ; which, all the World owns, does not change in our Bodies. Now this being a Fix'd Salt might remain last in the Calcin'd Blood, and be the Author of the Acid he extracted with the Bole Armoniac ; much after the same manner as Common Salt mix'd with Bole Armoniac in a Retort yields a Spirit of Salt.

To conclude. It may be further replied, That during the Calcination the Acid of the Air might incorporate with the tart Alkali of the Blood ; especially considering that 'twas calcin'd with an open Fire ; just as several Plants yield Saltish Salts by Calcination, which cannot be obtain'd by Distilling through a Retort. However, the Experiment does certainly make it out, that the Fire has no better Title to the Production of Alkali's, than of Acids. Which, I take it, is a Material Point.

CHAP. V.

Of Tastes. Particularly of Insipid, Unctuous, Nitrous, and Bitter Medicines.

HAVING explain'd the Method of discovering the Vertue of Med'cines by Resolution, Experiments, and the Second Qualities; it remains now to apply it to Practice. I begin with Tastes.

Doubtless Tasting is the Sentiment of our Souls, determin'd by Objects tickling the Fibres of the Tongue. These Objects, by the Variety of their Impressions, cause different Sensations; and, as the peculiar Configurations qualifying every Object to its respective Impressions, are not easily distinguish'd; so the difference of our Sensations is equally obscure; wherefore we are oblig'd to confound several different Tastes under one Name. As for Instance, The Sweetness of new Wine, Milk, Sugar, Honey, Oranges, Melons, Fruits, and Spanish Wine, is not altogether the same: Neither is the Bitterness of Beer, Coloquintida, Aloes, Wormwood, and Apricock-stones, all of a piece; yet we are under a Necessity of Confining all these different Sensations to One General Term, in order to avoid the Confusion of Equivocal Words, and the Inconvenience of departing from Customary Expressions.

On the other side, the Particular Configuration and Motion of the Parts of the Objects is also guarded off by unsurmountable Difficulties. The Spirit of Nitre, which is a Corrosive Acid, after dissolving Silver, gives bitter Crystals; and the same Acid Spirit, when it has dissolv'd Lead, gives a very sweet Salt. Now Lead and Silver are equally insipid; and 'tis a hard matter to tell how their Principles produce such different Effects. If we take the Crystals of Silver, pour Pickle upon 'em, then dry 'em; and when they're cold, melt 'em on the Fire; they become insipid, tho' formerly
very

very bitter and salt, and almost tart. Nitre has scarce any Taste, yet by Distillation it yields a very Acid Spirit, and by Calcination with the Powder of Coal presents us with a tart sharp Salt like Salt of Tartar. Sugar and Honey distill'd produce extream Acid Spirits. The Spirit of Nitre digested with Spirit of Wine, the one being a violent Acid, and the other very hot, they become a sweet Aromatical Liquor, known by the Name of the Spirit of Nitre dulcify'd. Gold dissolv'd in *Aqua Regia* tastes just like an unripe Sloe. Crabs Eyes destroy the Acidity of Vinegar, and become a Saline Concrete, &c. However, we must endeavour to penetrate as far as possible into the Structure of Bodies, in order to discover what we can. The principal Heads of such Mixtures as give different Tastes, are these following: Insipid, Nitrous, Bitter, Aromatick, Urinous, Saline, Lixivious-Tart, Wine-tasted, Sweet, Sour, Crabbed, Sulphureous, and Oily.

Insipid things are such, whose Parts are not Fine enough to make any particular Impression, or too pliable to effect any Motion upon the Fibres of the Tongue. Thus Marble, Stones, Glass, and all other Bodies that have compact Parts, not to be dis-joyn'd by the Spit-
tle, are incapable of moving the Tongue to any Sense of Taste. Water also is in the same Condition, as having movable and incoherent Parts, which are not stiff and steady enough to determine the Fibres to a suitable Motion. Nay, the Volatil Salts, if they be very fine and unmix'd, will give no Taste to Water, provided they be mix'd in moderate Quantities. This is made out by several Distill'd Waters, which are down-right tasteless, and yet turn the Solution of Sublimat Corrosive to a white Colour. Mr. Clos, a Member of the Royal Society, distill'd with a slow Fire, from the Flowers of Earth, an insipid Water that makes the Solution of the Sublimate white, and precipitates Silver dissolv'd in *Aqua fortis*. By the Flowers of Earth, we mean the greenish Slime that the Earth casts forth in untill'd Places after Equinoctial Rains.

Unctuous Bodies are not apt to make lively Impressions upon the Tongue, because their keen and piercing Particles

Particles are embarrass'd by others of a soft yielding Nature. However, if they be held long enough upon the Tongue, they make a distinct Sensation; their Saline Principles being dissolv'd by Heat and Spitte, notwithstanding their Confinement, exert a sort of Active Force. 'Tis true indeed, they are generally pretty fix'd, and unless joyn'd to Aromatick Ingredients, are somewhat lazy. Their Energy depends upon the Oyl with which they abound, and therefore they are us'd for mitigating Pain, unbending the Fibres, and qualifying sharp or acid Particles. This Taste is found in stale Filberds and sweet Almonds, and the Oyls drawn from 'em.

A Nitrous Taste stands half way betwixt a perfect Tastelessness, and a gentle Bitterness. It leaves a piercing Sense of Cold upon the Tongue, and is particularly attributed to Nitre, Snow, Well-water, and in some measure to Colewort Leaves. Nitre spreads its Taste over all the Liquors 'tis mix'd with, by vertue of long fine Parts like Needles, consisting of a Mixture of Acids and Alkali's. The Points of the Acids are cover'd by the Alkali's, and produce blunt Cylanders, that are not keen enough to dive deep into the Furrows of the Tongue. Bodies indow'd with this Taste, ought to inherit the Qualities of Nitre, and the other penetrating mixt Salts. However, they seem to partake more of the Volatil Acid than the Fix'd Alkali; because they provoke Urine, promote Digestion, quench Thirst, and quell the Fermentations of the Blood, which they could not compass without recalling and keeping under the exalted Sulphureous Parts. Upon this Account they are very serviceable in continual Fevers, and Inflammations of the Internal Parts.

As for Bitter Medicines; 'tis usual to start an Infinity of useleß Questions about their Nature. But I shall not stay to examine if they are Hot or Cold, &c. it being sufficient for the present purpose to say, That Centory, Coloquintida, &c. put the Blood and Spirits into extraordinary Motion: Whereas, on the contrary, Succory and Opium impair their Motion, and abate their Fermentations.

The

The Medicinal Consideration of Bitterness leads us to this Thought, *viz.* That all bitter Objects are compounded of unequal subtil movable Parts, which, by striking violently upon the Glandules of the Tongue, disturb the Repose of the Nerves, and occasion an uneasie Sensation in the Soul. But this Proposition is too general to point out the Consequences that are serviceable in Practice; wherefore 'tis needful to consider 'em Chymically, as Bodies compounded of Volatil Alkaline Salts, and a small quantity of Sulphur. The Volatil Salts stir up the Juices of the Body, unlock the Obstructions of the Passages, and throw out a great part of the Ferments they encounter, by the Pores of the Skin. If the Juices are gross and thick, they attenuate 'em. If Acid, they beat down their Points by the Motion they occasion, and qualifie 'em for contrary Effects.

I grant these Principles are not to be found in all bitter Ingredients: The Crystals of Silver in all probability possess no Volatil Alkaline Salts. But generally speaking they are there, though sometimes over-diluted with Phlegm. Succory, Opium, Wormwood, and Hops, are sufficient Evidence. Sometimes the Spirits drawn from bitter Ingredients retain the Taste of their Original. As for the bitterness of Burnt Honey, it is only to be attributed to the Dissipation of the Spirits and Volatil Salts, and the melting of the Sulphur and coarse Salts.

All bitter things kill the Worms, either by reason of their rapid Motion driving 'em into the Bodies of the Insects, or because they over-refine the matter of their Nourishment, or else stop the Orifices of their Lungs and Breathing Organs, so as to choak 'em.

Thus we see several Authors are mistaken in determining all Bitter Things to be Gross and Earthy; since their Analysis presents us with Volatil Parts.

The Question is often times put, Whether all bitter Things are Alkali's? To which I answer, That they possess some Volatil Alkali's; but they are always more or less cramp'd and embarrass'd. Hence all Bitter Things do not give a green Tincture to the Syrup of Violets;

Violets; they do not precipitate the Solution of Sublimate, nor Ferment with Acids; as proper Alkali's ought to do.

Besides their Vertue in opening Obstructions and killing Worms, they're entitled to many other Excellencies. They open the Orifices of Vessels, they break Imposthumes, Purify and Cleanse Ulcers, and in fine, carry off all tough Tenacious Humours. Now all these Effects must needs spring from Parts that are very subtile, nimble and rough or unequal. An Imposthume cannot be broken, unless Spirits be detach'd to the part, to put the matter in Fermentation. Now this can never be affected but by fine Subtile Parts. The Orifices of Vessels can never be open'd, nor the Humours contain'd in 'em rarify'd, unless we suppose rough unequal Particles nimbly toft to and again. To Cleanse Ulcers, 'twill be requisite that the Pores be open'd, and the matter Attenuated; which can only be compass'd by moveable refin'd Parts.

Hence I conclude, that we ought not to give implicit Faith to the Opinions of the Ancients. We may say of our Predecessors, as *Galen* of those in his time, That we ought not to be so wedded to the Opinions of the Ancients, as not to try their Truths by the Test of Reason and Experience.

Therefore I assert, that Bitter Medicines are such as rarify thick Humours, Mortify the sharp Ferments in the Stomach, Guts, and first Passages, and qualify those in the Blood. And thus we need not wonder that the greatest part of Stomachical Medicines, and all those proper against Fevers, are of this Class.

The variety of these Bitter Medicines occasions their various rarefaction of Humours, and Mortification of different Ferments. Thus Opium containing more Sulphur than Volatil Salts causes only a moderate Fermentation and Rarefaction in the Blood. However, the Fermentation it occasions increases gradually as the course of the Spirits is interrupted, and terminates in Sweats. On the contrary, Aloes has very little Sulphur

Sulphur, but is plentifully stor'd with Salts, which quickly dissolve in the Blood, and occasion a notable Rarefaction; they open the Vessels, provoke the Terms in Women, and frequently raise the Piles in Men. The Jesuits Bark has but few pure Volatil Salts, they being mostly qualify'd by Volatil Acid Salts, as in Sal Armoniac; for this Reason it do's not raise such a Fermentation in the Blood as Aloes; and by Reason that it is not possess'd of a Rosin, as Opium is, it neithers procures Sleep nor Sweating. However its Salts, tho' corrected by Acids, retain an Alkaline Absorbent quality, by Vertue whereof 'tis admirably fitted to suck up the Ferments of intermitting Fevers; especially considering that it contains some Volatil and Rosinous Parts besides.

In fine, 'Tis worth observing that Bitter Medicines do not rarify the Humours, or grate upon the substance of the Parts, so much as those of a sharp tart Character; especially, if the bitterness be Tinctur'd with a Styptic Taste, as in Rhubarb and Wormwood.

'Twere easie to Multiply the Divisions of bitter things, according as the bitterness is more or less alloy'd with Forreign Ingredients. Thus the Rindes of Oranges and Citrons might be entitl'd to an Aromatical, Rhubarb and Wormwood to a Styptic; Almonds and Peach and Apricock-stones to an Oily, Coloquintida to an Austere, Aloes to a sharp, Opium to a Gummy, Beer to a Sweet, and the Jesuits Bark to an Earthy Bitterness. But a ~~Just~~ Discourse upon this Subject would be too bulky. Besides I cannot see what use such an infinity of Divisions can pretend to, without a sufficiency of Experiments to back them.

C H A P. VI.

Of Acid, Sharp, and Aromatick Medicines.

THE First Property of Acids is, That they prick the Tongue. The Second, That they Ferment with Alkalies. Not that they always Ferment with all Alkali's. The Pores of the Alkali must be proportion'd to the edges and points of the Acid Particles, that so they may be able to procure entrance with some struggling. By their admission the Holes and Passages where the subtile Matter was wont to range at Liberty, are block'd up; upon which it breaks thro', and dis-unites the resisting Parts, forces 'em to fly back into larger Dimensions, and sometimes by the Rapidity of its Motion gives 'em a sensible Heat.

Acids do not only Separate the Parts of Lixivious and Alkaline Bodies, such as Pearl and Coral; but likewise those of Earthy and Metallick Bodies. Thus Distill'd Vinegar will dissolve Lead. The Spirit of Nitre dissolves Silver, Iron, and Copper; but without the Spirit of Sea-salt, or that of Sal Armoniac cannot dissolve Gold. Indeed if it be mix'd with either of these it becomes an *Aqua Regia*, and effectually dissolves it.

Tho Acids dissolve some Substances, they congeal others. They rob all Sulphurs of their Motion; for their points joyn and entangle the Oily hooked Parts, and so sink their Liquidity. The Spirit of Nitre fixes Oyl of Olives, it gathers the Sulphureous Particles of its Milky Part, and converts 'em into Curd. On the contrary, Alkaline Salts preserve the dissolution and liberty of the Sulphureous Parts, either by Vertue of the Fire retain'd in their Pores, or by subduing the Acids that might congeal 'em.

To

To the above-mention'd Properties we may add some others that are equally General, as for Instance; that they give a red Tincture to all Sulphurous Liquors, such as the Tinctures of Roses, Violets, Turnefel, Mallows, &c.

Acids are generally divided into two sorts: Namely, the Volatil, and Fix'd kinds. But with regard to their variety of Tastes the divisions are more enlarg'd. Some are Corrosive, as the Spirit of Salt, and that of Vitriol: Some are sharp and Styptic as Alum; some have a dry sharpness as Citrons; some have a raw sharpness as Verjuice; and some have a stale sour sharpness as Vinegar: Now all these Acids have different Talents. The Corrosive sort are impregnated with the fluid Salts of Minerals, and accordingly dissolve Mettals; the Styptic kind are the Product of the Earth where sharp Minerals prevail; those of a raw or dry sharpness are only Acid Spirits that were never soften'd by Fermentation, and consist not of Liquid Salts, and perhaps upon that account are unfit for preserving Bodies from Putrefaction, for want of solid Maffy Parts; whereas the stale sharp Acids which are produc'd by the evaporating of the Spirituous Part, and exalting the Salts; these I say, possess large Maffy Parts fit to preserve Meats, and prevent their rottenness.

The Ancients fancy'd that Acids were cold and dry. They rang'd 'em among the Aperitives and Cleansers. But charg'd 'em with an offensiveness to the Nerves, an aptness to contract the Guts, and a peculiar Enmity to the Womb. They assign'd 'em a Repercussive Quality, a power to stanch Bleedings, especially those of the Womb, and Piles; and a Virtue to mitigate all Inflammations and Pain caus'd by Heat.

The Ancient Physicians have been equally faulty in alledging fraudulent Experiments, and building upon feeble Reasons, especially where the first Qualities of mix'd Bodies are concern'd. These they have a mighty zeal for, and would fain derive all Effects from their Energy. As for Instance, They pretend

that all Acids refine the Humours and render 'em Volatil. Whereas on the contrary our Humours as containing large quantities of Sulphur are thicken'd and Congeal'd by 'em.

I grant they were in the Right in saying that Acids are offensive to the Brain and Nerves. They are apt to Prick and Sting the Nerves, and so cause Convulsions. Besides they fix the Humours, and consequently thwart the due Filtration of the Spirits. They are likewise Enemies to the Womb, either in twitching its Membranes, or awaking the Ferments lodg'd therein. They stanch Bleeding upon two accounts. First, They congeal and rally the running Stream. Secondly, They Sting and contract the fleshy Fibres, and so shut up the Passages. Taken Inwardly, they stop Bleedings by thickening the Blood. They resist Defluxions, by pricking the Nerves of the Body; and provoking the fleshy Fibres to contract themselves, and squeeze up the Humour that broke in upon 'em.

The pointedness of their Parts gains 'em a Passage into the soft Substance of Worms, and enables them to destroy 'em. The Figure of their Parts being improper for Motion, they Fix the exalted Sulphur of the Blood, and abate the Violence of its Fermentation.

In the beginning of Inflammations, Acids are successfully Employ'd. Because, 1. They lessen the Motion of the Morbifical Fermenting Matter, which distends the Vessels. 2. They thicken and fix the Exalted Sulphureous Parts. 3. They Mortify the Sharp Salts. 4. They sollicit the Spirits to rally into the Fibres, and Fortifie 'em against the Irruption of the Humours. After the Inflammation is much advanced, when the Matter is Extravasated, or at least has been Lodg'd some time in the Fibres and disabled 'em; in this Case, Acids are Pernicious. Because, 1. They thicken and retain the Extravasated Matter. 2. They shut up the Pores and prevent the insensible Transpiration. 3. Supposing they were capable to dissolve the Humours, and beat 'em back

to their Vessels, yet even that might be of ill Consequence, since the Humours may be seiz'd with a Malignity during their Fermentation and abode in the Part.

It will not be improper to subjoyn a Description of the Occult Acids and Alkali's: which are so call'd in Opposition to the Manifest sort: Because they are not discover'd by their Taste, but only by the Effects they produce, like to those of the other kind. The Occult seems to consist of the same Parts as the others; only they are more embarras'd and overrul'd by Foreign Particles.

Occult Acids Ferment with Alkali's. Besides, they likewise give a red Colour to all Sulphurous Tinctures, such as those of Turnsel, Violets, Roses, &c.

Occult Alkali's Ferment with Acids. They dissolve the Sulphureous Parts, and accordingly give a greenish Colour to all Sulphureous Tinctures. If they are Volatil, they make white the Solution of the Sublimated Corrosive; if Fix'd they make a yellow or red Precipitat, as I intimated before.

Tachenius alledges that all cold Plants afford an Occult Alkali. He brings in Lettuce and Purslain for Evidence; and would have added Sorrel, had not its manifest Acidity shock'd him. The mighty Reason that drove him upon that Thought, was this. He fancy'd that all Acids create, and all Alkali's remove Pain. Whereas Caustics which are plain Lixivious Alkali's do effectually evince the contrary. Besides, 'tis well known that Acids are very proper to mitigate Heat and allay Pain. 'Tis true, Lettuce, Purslain, Succory, and several other cooling Plants afford a great deal of Volatil Alkali's, and their Spirits whiten the Solution of the Sublimate; but their Evidence is not sufficient to establish a General Rule. Thus Sorrel, for Example, tho' it may contain a few Volatil Salts; yet they are so embarras'd and cramp'd by the large quantities of Fix'd Acids that their force is quite sunk.

All Acids impair the force of Alkaline, Bitter, or Tart things. They either stop the Motion of their

Other Effects of Acids.

Salts

Salts, or work up our Humours to a Contrary Disposition. They stop Vomiting, either by qualifying the Sharp Salts, or fixing the exalted Sulphur, that occasion'd it; or by disposing the Stomach to other Motions. Upon these Accounts 'tis, what we frequently see, that they hinder the Operation of Vomits and Purges. They promote Urine, and sometimes joyn Issue with Diaphoretics. They likewise abate Colic Pains, as I'll shew by and by. In fine, The Operation and Effects of Acids are vastly different according to their various Natures.

Sharp Taste.

Tart, or Sharp Medicines are very unpleasant to the Tongue. They generally abound with Fix'd or Volatil Alkali's; and accordingly Ferment with Acids, Precipitate the Solution of the Sublimate, and give a greenish Colour to the Sulphureous Tinctures.

This Sharpness is generally found in the Lye of the Ashes of Woods or Plants; in Cantharides, Spurges, &c. Such Medicines are entitled to a mundifying cleansing quality, by reason that they render the Humours Liquid, and imbibe Acids. Purgatives oftentimes partake of too much Sharpness, which causes the Gripling of the Guts and uneasiness that attends 'em. Upon which account Acids fixing these Sharp Volatil Parts do considerably lessen their force.

The Lixivious sharpness of Lyes is quite different from the burning sharpness of Elaterium, Euphorbium, and Cantharides. The former are only serviceable to qualify Acids, dissolve Sulphurs, and melt down the thick Humours, especially if the sharp Particles are lodg'd in a large quantity of Phlegm. Whereas the others frequently Ferment with our Serum; sometimes they Purge, or pass by Urine; and sometimes they tear, twitch, and enflame the Membranes, notwithstanding that they're sufficiently diluted with Water or Phlegm.

If the Lixivious sharp Ingredients are dissolv'd in a sufficient quantity of Phlegm, they only Mundify and Cleanse upon external Application. But if they are

are apply'd by themselves, they burn and eat the Callous Ulcers, witness the Caustic-stone.

On the contrary, the burning sharp Ingredients separate the Skin and Cuticle, Ferment with the Serous Humours contain'd in the Cuticular Vessels, and like Fire make them rise up in Bubbles and Blisters.

The occasion of that Remarkable Difference, is this. The Lixivious Salts are too gross to cut through the Cuticle without tearing it; and therefore consume, and as it were eat away its very Substance; they scarce Ferment with the Liquors contain'd in its Vessels, as being apt to escape thro' the open'd Breach.

On the other side the Burning sharp Medicines are able to Penetrate thro' the Pores of the Cuticle without tearing or breaking it; and for as much as the Serous Humours lodg'd underneath are stock'd with Acids, they Ferment with them, so as to occasion their eruption from the Vessels, and rising up in Blisters.

Both the one and other are only entitled to such Violent Effects by the extream activity of their Salts, whether Fix'd or Volatil, as being neither enclos'd by Acids nor intangled in Sulphur. 'Tis true, sometimes their *Analysis* presents us with a sort of Sulphur; but its quantity is so inconsiderable, or at least 'tis so volatil, or over-power'd by Sharp Salts, that 'tis not in any Condition to make head against them.

The Aromatick Taste of Medicines seems at first view to depend upon their Smell: But besides their Smell, *An Aromatick Taste.* the greatest part of Spices have a Peculiar Taste, that the Tongue is not sensible of till after some time. Acid and Sharp things give their Impressions out of hand; whereas these require that their Salts be stripp'd and unripy'd in the Mouth, before they discover their Taste. Then indeed they give a lively Impression, but their Heat and biting sharpness are much less than that of the burning Sharp Ingredients. Their Taste seems to proceed from Volatil Alkaline Salts

cover'd with Earthy Particles, and qualify'd by an Oyl which is in some measure Tinctur'd with Acids. Accordingly we find they present us with a great many Sulphureous Odoriferous Parts, witnes Cloves, Annis-seeds, Fennel-seeds, Cinnamon, &c.

They are ally'd to the Ferment of the Stomach, and by consequence Fortify it. Besides, their stinging quality gathers the Spirits into the Fibres of the Stomach. Consequently they promote Digestion, Dissipel Wind, and remove the Colic. Their Oily and Subtile Parts put the Mass of Blood into a Fermentation, and so occasion Sweats. However we ought not to confound the Medicines that yield Aromatical Tastes, with those that give only Aromatical Smells. Thus, a Nutmeg* has an Aromatical Smell, but its Taste is rather Unctuous: Angelica, and Masterwort Roots are quite Tasteless, and yet they have an Aromatick Smell.

CH A P. VII.

Of other Tastes.

ALL other Tastes take Rise from the mixture of sharp and acid Ingredients, interlac'd with some Foreign Earthy Matter.

*A Salty
Taste.*

Saline Things are a Composition of Acids and Alkali's. Thus the Spirit of Salt pour'd upon Salt of Tartar, makes a true Sea-salt. Notwithstanding that they possess Acids, their Effects are much of another Form. 1. What an Acid Dissolves they Precipitate. 2. They hinder the Coagulation, which Acids are apt to occasion. Hence we conclude, that in Medicines of a Salty Taste the Acid is not predominant. Salt prevents Corruption, partly by keeping off the Eggs of Insects with its stern stiff Particles; and partly by shutting the Pores of the Body 'tis mix'd with, and rendring it
more

more compact. For the flaggy loose Texture of the Body, and the Eggs of Insects, with which the Air abounds in Summer, are the only Cause of Putrefaction. And in Winter things are not so apt to putrifie, because, as the Physicks inform us, the Air is fill'd with Saline Particles that cut and gash the Eggs of Insects. Salts prick the Nerves, and occasion the Sal-lies of Spirits into the Parts, and therefore are said to cause Heat. For the same Reason they are said to dry, because the Flethy Fibres being contracted by the Spi-rits, squeeze out the Liquors of the Glandules.

Thus much for the the Difference between Saline and Acid Medicines. It remains now to point out that between the former and Alkali's. The chief Heads of Difference are these. First of all, Saltish things do not melt so easily in the Air as Alkali's; the latter being more porous, give an easier Admission to the Airy Moisture. In the next place, Volatil Alkali's precipitate the Solution of Sublimat Corrosive; whereas those of a Saline Character do not alter it at all. Now this Solution is nothing else but a Water laden with Acids bearing up the Mercurial Particles; and the Al-kalin Salts, which either suck up or destroy the Acids, disengage and release the Mercury from their Clutches; whereupon it falls to the bottom. But Saline things make no Precipitat, being neither apt to ferment, nor to raise any sensible Motion, unless they be richly stor'd with Alkali's. In the third place, the Lixives which afford Alkali's are distinguished from those yielding Sa-line Products, I say are distinguish'd by this Mark: Towards the end of the Evaporation the latter make a sort of Mucilage; whereas the former present us with no such thing, by reason that their Salts are not point-ed enough to fix and gather the small remains of moi-sture.

The Saltish Salts being a mixture of Acids and Alkali's, have an equal influence upon Sulphur and Water. They are the true Cement of Oyl and Phlegm; and by uniting the Parts of mix'd Bodies, preserve 'em from Corruption; for 'tis only the Incoherence of Parts that makes way for Corruption.

They're

They're lifted in the Aperitive Rank, and are oftentimes joyn'd to weak Purgatives, to promote their Operation; Witness *Mefue's* Method of adding Salt Gem to Agaric, &c.

They are much diversify'd in proportion to the variety of the Principles that gave 'em a being. Some are Corrosive, as Tartar Vitriolated. 'Tis glutted with the Spirit of Vitriol. Others are bitter, as Sea-salt, 'Tis drawn by Evaporation from Sea-water. The common Salt, which is only the first Crystals that thicken in the Salt-Marshes, is more stuff'd with Alkali's, than the latter Crystals, or this we now speak of; which generally makes a sort of Precipitation or Coagulation with the Oyl of Tartar *per deliquium*, whereas the other does not.

'Tis true, when the Common Salt is mix'd with the Oyl of Tartar, there sinks to the bottom a grey Powder, which is only the unmelted Dregs or Filth of the Salt. But the true Sea-salt made by Evaporation has no such Filth; and if 'tis mix'd with this Oyl, precipitates a white Earth.

'Tis not without Surprise, we observe, that the Solution of Sea-salt in common Water, that part of it which congeals last, and is, as 'twere, dry'd by the meer Force of the Fire; this, I say, melts easily in the open Air, and at the same time possesses a large share of Acids; for its Solution in common Water, mix'd with Oyl of Tartar, makes a white Curd. In general, we may fix upon this Conclusion: That such Medicines as abound with saltish Salts preserve the Union of the parts of the Blood, and promote Digestion. Upon these Accounts they are serviceable in Dropsies and Cachexies; but such of 'em as abound most in Volatil or Fix'd Alkali's do justly claim the Preference.

Sweet.

A sweet Taste supposes a greater Acidity than the Saltish; but its Acid is embarrass'd by pliable hooking Parts; that is, by a great deal of Sulphur. Thus the Distillation of Sugar and Honey presents us with an Acid Spirit and an Oyl. By vertue of the former Sweet Things mundify and cleanse; by means of the latter, they cover the Feeble Parts from the Attacks
of

of sharp Salts. Therefore Sugar, Honey, Liquorice, &c. are dedicated to the Lungs, because they are often attack'd and gall'd by sharp Salts.

The Imprisonment of the Acid within the Sulphur is the greatest Motive for the Reception and agreeable Entertainment of Sweet Things. But when that Acid comes to be let loose, it may prove very Offensive. Now, if the Stomach be crouded with Acid Humours, they fix, and thicken, and disengage the Acid of the sweet Ingredient. This the Ancients had in view, when they said, *Dulcia facile bilefcunt*. So much for the General Qualities of Sweet Medicines.

Their particular Vertues are as variable as their Kinds are different. Sugar, Honey, Liquorice, Milk, common Water, &c. have, each of 'em, a Sweetness peculiar to themselves. There's a certain sort of Sweetness attends Sulphurs mix'd with Salts that are temper'd by Fermentation; witness Raisins and mellow Fruits. If their Phlegm be gently evaporated, they become yet sweeter; witness dry Raisins. Another sort of Sweetness may be entitled that of the Sugar-kind. 'Tis observ'd in Sugar, Honey, Manna, &c. and seems to imply, That the fine pointed Acids, tho' embarrass'd with Sulphur, retain some Active Force. To conclude, Almonds, Milk, and the like, present us with a soft Oily Sweetness, different from the other kinds. This argues a scarcity of Salts, and abundance of Sulphur.

The Wine Taste springs from a coarse Acid melted in Phelgm, and qualify'd by fix'd and Volatil tastes. Sulphurs. The Analysis of Wine is sufficient evidence. This Taste is applicable to almost all ripe Fruits, their coarse Sulphur being in some measure attenuated by means of the Fermentation. Thus we find that Must Distill'd affords a gross Oyl; but when the Fermentation has wrought it into Wine, it yields an Ardent Spirit.

A Urinous Taste argues a mixture of Acids and Volatil Alkali's with some Sulphur. The Analysis of Urine, and of all other Bodies of the like Taste may serve for Proof.

Lixivious

A Lixivious Taste is near akin to the Sharp Taste describ'd above. It implies fix'd Alakin Salts, melted and dissolv'd in Phlegm.

Austere.

The Austere Harsh Styptic Taste, is the result of a coarser Acid than that of Sweet things. When this Acid is refin'd, it affords a charming Sweetness. Thus ripe Fruit exchange their former harshness for an agreeable Sweetness. While they are harsh and coarse they are of difficult Digestion because they do not easily Ferment. Accordingly we see they oftentimes cause a looseness, or if they happen to ferment, their motion is so Rapid, that they work the Blood and Spirits into a Fever. If their acid is qualify'd with Sulphur, they become Astringent, being given in small quantities. In that case they do not grate the fleshy Fibres so violently as to rend 'em, but only occasion slight Contractions. Hence Galls, Quinces, &c. are justly reckon'd Astringent.

Styptics moderate the Operation of sharp and bitter Medicines; especially if they're impregnated with Sulphur, or possess a quantity of Acids sufficient to encounter 'em.

** Acerbe.*

Some have mark'd out a distinction betwixt an Austere and a * harsh Taste. But considering that *Mesue* confounds 'em, that their impression upon the Tongue and their other qualities are alike, I take no further notice of it.

C H A P. VIII.

Of the Smell of Medicines.

THE Smell of Medicines do's not only point out their Principles, but likewise has a powerful influence upon the disposition of Persons, especially such as are weak and entitled to subtille and movable

vable Spirits. Women Subject to Hysterical Passions are sufficient evidence. The Smell of the least Flower will make 'em fall down, void of all Sense and Motion. And the most effectual Remedy to retrieve their lost Senses, is the Smell of strong harsh-scented things, such as burnt Paper, the Spirit of Urine, *Assa Fœtida*, &c. 'Tis an important piece of knowledge to understand how Odoriferous Medicines act upon Bodies, but at the same time 'tis not easily come at.

'Tis the Opinion of some Physicians, that Sweet Smells tickle the Nerves which terminate in the Membranes of the Nose, and by so doing determine the course of the Spirits that way, with so full a Current, that the other parts are abandon'd and consequently depriv'd of Sense and Motion. On the other hand, say they, Harsh Smells grate so violently upon the Membranes of the Nose, that they oblige the Spirits to retire to the Brain; from whence they return to their wonted Posts in the other parts of the Body.

'Tis certain, that contrary Smells apply'd to the Womb give contrary Effects. Sweet Smells dilate and enlarge its Pores; they bring down Spirits into it, and drain it of sharp Humours. Whereas harsh Smells furnish it with sharp Particles; they provoke it to Contractions, and consequently stop the Passage of the Spirits.

Now in order to form a just Idea of this *Phænomenon*, 'tis worth observing, That harsh Smells occasion a sort of Head-ach, because they provoke the Nerves passing along the *Dura Mater*, and oblige that Membrane to contract it self; whereupon the Receptacles of the Spirits are straitned, and consequently the Spirits are squeez'd into other Passages, and thus the other Parts are restor'd to Sense and Motion. On the other hand, Sweet Smells enlarge the Pores of the Parts, so that the Spirits repairing thither, forsake their former Stations. To say that Harsh Smells beat back the Spirits, is an unreasonable advance, since we cannot conceive any occasion of their Retreat.

'Tis

'Tis needless here to enter further into that Question, which I've already discuss'd in my *Rational Anatomy*, where I have endeavour'd to shew, that all Smells depend upon the Dispositions of the Air within the smelling things. I shall content my self in this place with a Description of their Structure, and the Parts they're compounded of.

It seems the Principles of Smells are more Active and Volatil than those of Taste. Because 'tis only by means of the Air that they affect the Organ; and oftentimes they lose their Vertue in being expos'd to the Air. Now Tastes are more durable.

In general, they present us with three Principles; namely, a Spirit, a Sulphur, and a Salt.

If the Sulphur is coarse and well-stock'd with Volatil Alkali's, they give an ungrateful stinking Smell.

On the contrary, If the Sulphur contain Volatil Salts fix'd within an Acid, their Smell is Aromatical and very agreeable. Thus the Spirit of Wine Distill'd with Oyl of Vitriol yields a charming Smell that Perfumes the whole Room. And the same Spirit mix'd with Spirit of Nitre produces the same Effect.

But if the Sulphur mix'd with the Acids is not Volatil, the Smell will not be near so agreeable. Thus two parts of Oyl of Turpentine distill'd with Oyl of Vitriol afford a clear Liquor that smells just like Brimstone.

'Tis apparent that disagreeable Smells may become aromatical and pleasant. Several things give a fragrant Smell at a due distance, which are very unpleasant upon a nearer Approach. Others by Fermentation change their Smell to an advantage. Grapes at first smell disagreeably; but when they are turn'd into Wine, are very well scented. Some observe that Aromatical things robb'd of their Smell, will retrieve it again in stinking places. Mr. Boyle confirms the Observation by an Experiment upon Musk.

To conclude. Strong-scented Medicines generally consist of Volatil Alkali's mix'd with a coarse Sulphur. Upon which account they are said to qualify the sharp Humours,

Humours, and by consequence fortifie the Nerves. Sweet-scented Medicines are not altogether Masters of the same Qualities. However, they're possess'd of Subtil Parts, tho' they are not always in rapid Motion; and accordingly promote insensible Transpiration, and disperse the sharp Humours which they cannot tie up.

Smell gives us to understand the Quantity and Quality of the Sulphurs that Medicines consist of. Accordingly it leads us to the Knowledge of several Specifick Virtues. To it we owe the Discovery of all the Nervous Herbs, and most of the Pectorals. Smell is useful to trace out the Salts of Medicines. But that Design is not to be carry'd on without many different Experiments, and various Mixtures.

Smell discovers the Sulphur.

As some acid Tastes are said to be *Occult*, so the Smell of some Medicines may be entitl'd to the same Character. Some Woods, especially *Lignum Vita*, afford no smell, even when they're burnt; But when they're jogg'd or sawen smell very agreeably. *Sal Armoniac*, whether burnt or pounded, gives no smell, unless it be mix'd with Chalk or Oyl of Tartar.

CHAP. IX.

Of some Experiments.

I Shew'd above that the Mixture of Medicines with Liquors taken from our Bodies, discovers their Virtues. This method may be further improv'd by injecting Medicines into the Veins of Animals, and minding the accidents insueing thereupon. This Project of Injections is not only a meer Experiment, but may properly be call'd a Remedy. Dr. *Fabricius* of *Dantzick* says that he injected a Purgative Medicine into the *Mediana* of a Soldier Pox'd to the degree of an *Exostosis*. The form of the Purge was two Drams of Liquor. Four Hours

Injections for discovering the Vertues of Medicines.

Hours after the Injection it purg'd him gently, and the Protuberances disappear'd.

He was not the first that beat out this Road. Several English Physicians had made the same attempt before him; but out of a tender Regard to Men's Lives, they confin'd the Experiment to Beasts; And upon that foot made several pretty Observations, that may be very serviceable in the cure of Diseases. 'Tis true we have not yet a sufficient Number of Experiments to justify, that Practice upon Men; unless the Case be desperate, and all other Medicins prove ineffectual. Those who desire to be further acquainted with this Subject may consult *Etmullerus's Chirurgia Infusoria*.

However since such Injections are unusual in the cure of Diseases, I only apply 'em to the Veins of Beasts, in order to discover the Alterations that Medicines occasion in our Humors. According to our general Rule, Acids fix the Blood; *Aqua fortis*, the Spirit of Nitre and that of Vitriol injected, kill the Creature outright; and fix its Blood like the Branches of Coral: Strong Alkali's, such as the Oyl of Tartar, likewise cause Death; they sink the Consistence of the Blood, and over-dissolve it; meeker Acids and Alkali's are not so pernicious. The Infusion of the Jesuits Bark, only dissolves the Blood a little, and do's no further harm. Perhaps 'tis its dissolving Vertue that cures most Fevers.

Another way of finding out the Vertues of Medicines, is mingling 'em one with another. Thus we mix Galls with Mineral Waters; and if they turn black, conclude that they're impregnated with Vitriol. 'Tis needless to insist upon this Subject. A small Measure of Application will serve to discover all the Consequences it affords.

C H A P. X.

Of the Preparations of Medicines.

I Intimated above that the general Description of Medicines might be cast into three Heads; namely their Choice, Preparations and Mixtures or Compositions. The first is already accounted for.

And, now I am come up to the general Method of *The Preparation*, the Design of Preparation is either to *ration of* augment their Force, or to tame some offensive *Medicines* Quality, or to render 'em fit for use.

When we project to augment their force, or disengage their Principles, we prepare 'em by Fermentation *Augmenting their Force.* or digestion, Calcination or Detonnation, according as the Nature of the Medicines requires.

When our Business is to remove an offensive Quality, *Removing their Offensive Qualities.* we prepare 'em by Lotion, Infusion, Evaporation, CrySTALLIZATION, Filtration, &c. These Terms are too obvious to need a particular Explication. The third advantage that accrues by Preparation is the rendring 'em more agreeable to the Patient. To adjust this matter we must first consider whether a Solid or Liquid *Rendring 'em more agreeable.* Form be most proper.

The Solid Forms to be taken inwardly are those of *A List of the Preparations.* Powders, Troches, Pills, Electuaries, Extracts, Salts, Magisteries, Precipitats, and Flowers.

The Liquid are Juleps, Apozems, Distill'd Waters, Potions, Emulsions, Ptilanes, Medicinal Wines, Syrups, Ardent Spirits, Tinctures, Elixys and Licking Medicines.

Powders are Medicines reduc'd to fine dust, by Trituration, Cribration and Levigation; that is, pounding 'em in a Mortar; straining 'em thro' a Searce, and grinding 'em upon Porphyry or Marble.

Of the Preparation of Medicines. Part I.

Oftentimes an Artift is oblig'd to use other Means for compassing the end. Since his design is only to refine the Parts of the Medicines, he must vary his method according to the Nature of the Subject. If it is a Metal, he had best File it: If a Horn, he ought to scrape or saw it, that so he may avoid the inconvenience which its greasy Parts might otherwise occasion. Moist or Glutinous Medicines must be dry'd, and sometimes calcin'd, before they can be reduc'd to Powder. When we heat 'em, in order to extract their Juice, or for any other Form besides that of a Powder, then indeed they stand in no need of such Preparations, a simple Cribration being sufficient to separate the fine and coarse Parts.

The Ashes of Woods, or Charcoal, are sufficiently prepar'd by a simple burning or Incineration upon an open Fire, without any Mixture. The *Calx* or Powder of Stones, or Mettals, is obtain'd by Calcination, that is by giving 'em a strong Fire, able to separate their stiff Parts. Sometimes indeed we dissolve the Mettals before we calcine 'em. When we lightly burn a Medicine, without reducing it to Ashes, the Preparation is call'd *Torrefaction*.

Extracts are prepar'd by expressing the Juices or Infusions of Medicines, and evaporating their superfluous Phlegm. Essential Salts are prepar'd by expressing the Juice, and Crystallising in a Cool place. Lixivious Salts are made from a Lixive or lye, strain'd thro' brown Paper, and gently evaporated.

Volatil Salts are produc'd by Distillation and Sublimation. Which last is a Preparation, whereby the parts of the Medicine fly up from the Fire to the uppermost Place of the Vessel, and fasten there.

Magisteries and Precipitats suppose a Dissolution of the Medicine in a proper *Menstruum*, and its subsequent Precipitation in the Form of a Powder, accomplish'd by weakening the Vehicle. Thus in preparing most Rosins we unfasten the Holds of the Spirit of Wine by pouring in common Water. And the Solution of Metals in an acid Vehicle, or that of the Sublimat Corrosive in Water, is brought to a Precipitat by pouring
in

in Lime-Water, or Oyl of Tartar.

Troches are made by incorporating the Simples and drying the Mixture: Electuaries, by mixing the Powders with the Pulps, Honey or Syrups, and boiling 'em: Pills, by boiling the Ingredients to a Consistence, without Exsiccation: And lastly, Flowers are prepar'd by Sublimation.

From the above-mention'd Particulars we may plainly infer, That one Preparation frequently requires others either antecedent or subsequent to it: As for Instance: If the Simple or Steele'd Regulus of Antimony were to be calcin'd, either by Fire, or-by a Burning-glass; it must be first bruis'd and ground on Porphyry, or a Sea-shell; otherwise the Fire will not be able to penetrate thro' the whole Mass; and that part of it which touches the Harth will only Flame. When this Regulus, Lead, Potters Clay, Tin, or Coral, are calcin'd, they rise an eight or tenth part in Weight, by reason of the Airy Particles that joyn 'em during their Conflagration. And these forreign Particles are generally Sulphureous, since Antimony calcin'd so as to receive additional Weight gives a high red Tincture to the Spirit of Wine. And if it be calcin'd otherwise, gives none such.

Oftentimes the Calcination of Bodies is usher'd in by *Detonation*. In which case we must throw 'em into the Crucible by Spoonfulls or small quantities at a time, and presently cover the Crucible. When the *Detonation* of one Spoonful is over, we throw in more and cover the Crucible again. These preparations are sufficiently exemplified in making *Diaphoretic Antimony*, *Sal Polychrestum*, &c. where the Nitre and Antimonial Sulphur unite into one Mass.

There is another surprizing Effect behind; Namely *Fulmination*, which sometimes follows Preparations; as when Gold dissolv'd in *Aqua Regia* is precipitated by Oyl of Tartar. The Oyl of Tartar, and the acid of the *Aqua Regia* form a sort of Salt Petre which mixes with the Sulphur of Gold, and makes a violent thundring Noise; by reason that the Parts of the Gold are in a Capacity to resist the force of the Air,

that endeavours to unbend 'em. A Fulminatory sort of Antimony might likewise be made thus. Take the *Scoria*, or dross of *Regulus* of Antimony. Boyl and dissolve it in common Water. Filtrate the Solution, and add to it some *Aqua Fortis*. It will ferment and congeal into a dry Substance; which, tho' it be several times wash'd, will continue to Fulminat. So much is the Acid of the *Aqua Fortis* embarrass'd by the Sulphur of the Dross.

'Twere easie to amass an infinite number of Effects following the Preparations of Medicines; particularly the various changes of Color which follow Precipitations. But that is rather a Philosophical than a Medicinal Subject. I shall only mention two that are Productions of the Fire, and seems much different from Calcination. The first is call'd *Fusion* or Melting, and happens when a solid Body by means of the Fire becomes Liquid. It always ought to precede the Calcination of Metals and most Minerals. The other is Styl'd *Vitrification*; and happens when the Salts contain'd in the Ashes are melted, and unite with the Earthy Parts. Their Union is almost indissolveable; witness the Glass of Antimony.

The Preparations of Liquid Forms are more numerous and cumbersome. In Preparing an Apozeme the Roots must be cleans'd and wash'd, sometimes their strings cut off, &c. then the parts of the Medicines must be dissolv'd in the Liquor. If the Dissolution is perform'd in a cool place, 'tis call'd *Maceration*; if the place is Hot, we Christen it *Infusion*; if the Medicines are boyl'd in the Liquor, 'tis termed *Decoction*. Oftentimes the Medicines are steep'd in some Liquor which serves only to correct 'em, or take off some outer parts, such as the skins of Almonds, &c. This Preparation passes under the Name of *Immersion*. Oyls are made by *Expression* or *Distillation*. The Oyl Bodies being reduc'd to PASTE in a Mortar, and squeez'd betwixt two hot Boards, yield considerable quantities of Oyl. The same Method is likewise us'd to Extract the Juices of Plants.

Distill'd

Distill'd Oyls, or Waters, are Prepar'd by *Distillation*. Which is a common Operation in Chymistry, and very serviceable to unfold the Principles of Medicines. 'Tis generally distinguish'd into three kinds. The First is that *per ascensum*; when the Vapors of the Medicines ascend to the Head of the Alembic, and being there condensated run down thro' the Nose into the Receiver. Thus *Aqua Vita*, Rose-water, &c. are Distill'd. There are several Instruments employ'd in this Operation: Namely, an Alembic, Refrigeratory, a Balneum Mariæ, a Fire of Sand, an open Fire, &c.

The Second kind of Distillation is that *ad latus*; 'tis us'd when the Medicines are neither Volatil nor full of Vapors, and consequently cannot mount the Head, Thus Woods and the parts of Animals are Distill'd. Thus we draw Oyls, Spirits, and Volatil Salts, and even Mineral Spirits. The Instrument employ'd in this Preparation, is a Retort fitted to a Receiver, which is set on Sand or Coals, or a Reverberatory Fire, as there is occasion.

The Third sort of Distillation is that *per Descensum*. 'Tis perform'd thus. The Vessel is surrounded with Fire above and along its sides. Its Orifice is pointed downwards and Lut'd to another that stands underneath; The Medicines being kept up by a Plate with holes in it. Several Gums and Woods may be Distill'd in this fashion.

Rectifying, is a repeated Distillation, or Sublimation, which separates the different Principles of what was formerly drawn.

Cohobation is a Series of Distillations following each other; in which the Liquor that comes over in one, is pour'd back on the *Caput Mortuum* in the other.

Syrups are Prepar'd by Boiling, Skimming, and Straining. These Terms are too obvious to need enlargement. The Straining here meant is called *Colation*, and is distinguish'd from Filtration by this; that it gently passes the Liquor thro' brown Paper; whereas the other do's it thro' a Sieve of Horse-hair or Linnen-cloth.

Clarifying.

Clarifying generally attends *Colation* 'Tis sometimes compass'd by the white of Eggs; whose Glutinous Parts fasten and incorporat with the coarser Parts of the Medicine, and keep 'em from passing the Sieve.

Infolation.

Tinctures and Elixys are generally Prepar'd by *Infolation*; that is, macerating the Medicines in the heat of the Sun, or a Dunghil. This is call'd simple *Infolation*. But there's another sort behind call'd *Circulation*; that is Macerating, or rather Digesting in two close Vessells, one being luted upon the other, and standing for several Days in an equal moderate warmth.

Aromatization.

Aromatization, or throwing of Spices into the Cullander, is now diffus'd. Our Modern Physicians choose rather to Season the Liquors with Distill'd Aromatical Oyls.

Fermentation.

Fermentation, is an Intestine Motion of the Parts of mix'd Bodies, which serves to unfold their Internal Principles. Thus 'tis Fermentation that Furnishes us with several Ardent Spirits and Volatil Salts.

'Tis oftentimes rais'd by dissolving or moistening the Medicine, and keeping it so for a considerable time in a warm place. But 'tis admirably promoted by adding Yeast or Mead.

Effervescence.

Effervescence differs from Fermentation. It frequently ensues upon the mixture of two Bodies which attack and enfeeble each other. Thus the Oyls of Tartar and Vitriol mix'd together produce *Tartar Vitriolated*.

Some may think I have omitted Distillation *per Deliquium*: But I purposely over-look'd it, because 'tis improperly call'd Distillation. 'Tis only the dissolving of a Salt by vertue of the Moisture of a Cellar. Thus calcin'd Tartar laid in a Cellar, its Salt dissolves, and becomes Oyl of Tartar *per Deliquium*.

Effervescence is not the only Result of the mixing of opposite Bodies. Coagulation and Fixation have the same Original. The former happens when two Liquid Substances run into a Curd, as the Spirit of Wine mix'd with the Volatil Spirit of Sal Armoniac. The latter takes place, when a Medicine which is naturally apt to evaporate, by mixing with other Bodies upon

upon the Fire, acquires a Solidity able to preserve, and sometimes increase its Weight, notwithstanding the Fire. As for Instance: Mercury readily evaporates upon the Fire; yet *Aqua fortis* renders it so fix'd, that it suffers the Fire without Diminution of Substance.

The following Experiment may serve for another Instance: Take eight Ounces of coarse Filings of red Copper, Four Ounces of the Filings of Iron, and Four Ounces of Ratsbane: Pound 'em, mix all together in a Crucible. Add a Lay of two Ounces of Tartar, and press 'em with your Thumb down to the other Ingredients. Take a smaller Crucible, and turn it upon the other, without luting their Heads together. Give a Gradual Fire in a Furnace. In eight Hours the Tartar will be calcin'd, and become black; without diminishing the quantity of any of the Ingredients. Thus we see the Ratsbane is fix'd and detain'd by the Tartar; for otherwise it loses three Fourths of its Weight. If the whole Mixture be laid upon a red hot Iron three quarters of an Hour, it rises a fifth Part in Weight. If put to a Reverberatory Fire, its additional Weight is yet more considerable.

This may suffice for the Preparation of Medicines. Those who desire a further Information may consult the Authors of *Galenical and Chymical Dispensatories*.

CHAP. XI.

Of the Compositions of Medicines; and their Forms.

A Young Physician ought to be particularly acquainted with the Method of prescribing Receipts, for fear of being mistaken in the Measures of compounding Medicines. Without this Qualification, he may order some things to be dissolv'd in such Liquors as will not receive 'em; he may enjoin Compositions wide of the Consistence he proposes; which, tho' it may seem but a

small Fault, yet it oftentimes proves hurtful to the Sick Person. As for Instance. If he prescribes a Plaster, that for want of adjusted Proportions of Ingredients, do's not stick to the Part, in this case the Patient is not better'd by it. If he orders two opposite Liquors to be mix'd which congeal to a Solid, his Patient will find difficulty in swallowing the Potion. Not to speak of an Infinity of other Escapes which Physicians frequently are liable to, by reason of their unacquaintedness with the *Materia Medica*, and the Forms of Prescription.

The Compositions or Mixtures of Medicines are distinguish'd with respect to the manner of using 'em, into the Internal and External Kinds, and each of 'em is either Solid or Liquid.

The Forms of Liquid Internal Medicines, are those of Juices, Lyes, Infusions, Decoctions, Distill'd Waters, ^{Id est} Potions, medicated Wines, Vinegars, Oxy-mels, ^{Id est} Syrups, Emulsions, Tinctures, Oyls, Ptisanes, Broth, Barly-drinks, Meads, Hydrosaccharum, &c.

Juices.

Juices deriv'd from Plants or Fruits ought to be prescrib'd fresh; because they're quickly spoil'd, especially if kept hot. They ought to be clarify'd by standing, and several times strain'd. If they're very thick we may moisten the Plant with clarify'd Whey, or any other Convenient Liquor, in order to facilitate their Expression. After this manner we take Juices from Purslain, Fumitory, Brooklime, Cresses, Houfeleek, Nettles, Scurvy-grass, Tops of Wormwood, Apples, &c. These different Juices may be mix'd with Purging or Alterative Ingredients, but in small quantities, because they are disagreeable by themselves, and perhaps the Mixture may hasten their Corruption. Sugar renders 'em palatable; but its quantity ought to be very moderate, because it impairs their Vertues very much. An Ounce and half to a Pound, in my mind, is sufficient. We must take care that acid Juices are not drawn in Metallin Vessels.

Lixives.

Lixives are made by dissolving the Ashes of Medicines in some Liquor, or extinguishing calcin'd Powders in common Water, or dissolving 'em in a Cellar.

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We may take the Ashes of Broom, Wormwood, &c, and dissolve 'em in Wine or Water. The Wine will admit a larger Quantity than the Water; because the Tartar of the Wine fixes the Alkali of the Lixivious Salts, and makes a sort of *Terra Foliated*. After they have stood twenty four Hours in a cool Place we strain the Liquor thro' brown Paper, and exhibit a Draught in the Morning, or at a due distance from the times of eating. The Vertues of these various Salts are different according as the Ashes abound with Alakin or Saline Salts. The common proportion is; from half an Ounce to an Ounce of the Ashes, for a pint of Liquor.

Lime-water is a Sort of Lye, as being made by extinguishing the Quick-lime in common Water, and pouring it off by Inclination. It is us'd both inwardly and outwardly, either with or without other Waters. It ought to be taken fasting. Some mix it with vulnerary Waters, or Vulnerary, Aromatic or Sudorific Decoctions, according as the different Indications require. And indeed, since it dejects the Appetite, and besides is very unpalatable, 'twill not be amiss to Macerate a few Spices in it.

Liquors drawn by the Dissolution of Salts or calcin'd Powders in a Cellar are likewise Lixives, for 'tis the Moisture of the Cellar that dissolves 'em. But they are very sharp, and should not be given but in small quantities and diluted with other Liquors. Thus the Liquor of the Flowers of Sal Armoniac sublimed with an equal quantity of Blood-stone: this Liquor is the Solution of the Flowers in a Cellar, and is given only to twelve or fifteen Grains in some convenient Vehicle, such as the Waters of *Carduus Benedictus* for the Small-Pocks, Rosemary Water for a Quartan Fever, a Cephalic Water for the Hypochondriacal Melancholy, &c. Three Ounces of the Vehicle is the lowest Dose. The Oyl of Tartar, and the Liquor of Quick-lime and Sal Armoniac Melted together, and dissolv'd in a Cellar, these, I say, are us'd the same way.

The Liquors of the Salts of Crabs Eyes, Coral and Crystal, are only Dissolv'd Salts; but they're too much Tinctur'd with the Vinegar or Acids, to possess the Vertues assign'd 'em. In-

Infusions are Preparations whereby the Vertues of Medicines are transplanted into Liquors by vertue of an equal moderate Heat. Thus the Medicines, whether Minerals, Metals, or Plants, are first bruis'd, slic'd, pounded and put into a Vessel; then we pour upon 'em Water, Whey, distill'd Waters, or Wine, till it rise two or three Fingers above 'em. The Vessel is cover'd and set upon hot Ashes: The Infusion continues ten, twelve, or twenty four Hours, according as the Medicines are; and then the Liquor is either pour'd off by Inclination, or strain'd thro' a Linnen Cloth or Hair Sieve. Generally the Quantity of the Liquor is not otherwise determin'd than to a *Quantum sufficit*. But a Physician may do in that as he thinks fit. Infusions are mostly order'd for purging or Emetic Potions. And when purging Ingredients are infus'd in common Water, we add some Salts to promote the dissolution of their Parts.

Of all Preparations Decoctions are the most surprizing. 'Tis almost unaccountable how Crude Earths, Calcin'd Stones, Calcin'd Mettals; Mercury, Crude Antimony, Sulphur, &c. should convey their Vertues to common Water in boyling. And yet Experience makes good the Assertion. When we boyl the Parts of Animals together with Medicines, the Name of Decoction is exchang'd for that of Broth.

'Tis observable that Simple Water is the common Basis of Decoctions, because it does not soure as Wine, nor wasteth as Brandy and Distill'd Waters. Besides, since 'tis less burden'd with Salts and other Principles, 'tis better accommodated for the Reception of those of the Medicines. However, Whey also and Mineral Waters are sometimes us'd.

When the Compositions are bulky, we first cast in the Minerals, then the Roots, afterwards the Woods and Barks, then the Leaves, Seeds, Fruits, and after some time the Flowers. Their respective times for throwing in are determin'd by the comparative Openness or Patency of the Body of the Medicine. Notwithstanding that Liquorice is a Root, we generally add it last of all, when the Decoction is just taken off the

the Fire, because its Salts are easily come at. The Quantity of the Liquor ought to be eight times larger than that of the Ingredients. And sometimes it may be twice as much. But in order to adjust the quantity to particular Cases, we ought to consider if the Ingredients give a strong or a faint Tincture. The Liquor may be boyl'd in to three Fourths or a Half; but we must still remember to maintain the due Proportion betwixt it and the Ingredients. Some Decoctions are order'd in close Vessels, others in open ones: Some in a *Balneum Maria*, others upon a naked Fire. The Vessel is sometimes of Earth, sometimes of Metal, according as the Indications are. As for Example; Acids forbid Bras. Sometimes, when the Decoction is over, it must be clarify'd with Whites of Eggs, to render it more agreeable. At least it must be strained, season'd with Spices, and mix'd with Syrup or Sugar; reckoning an Ounce of one or t'other for each Dose of the Decoction. Now the common Dose is Four, Five, or Six Ounces.

Some alledge, that when Ingredients are boyl'd in Water, we ought to leave out the Roots, Barks, and other Rosinous parts of the Plants, as if nothing but a Sulphureous or Saltish Vehicle could dissolve 'em. I answer, That the Rule does in some measure hold with Rosins, but not with Rosinous Bodies: Because, while the other Principles of the same Body are dissolv'd in the Water, they promote the Solution of the Rosin: Witness Opium, which notwithstanding its Rosinous Consistence, melts partly in Water. All the World will own that Jalap, the Jesuits Bark, &c. will give strong Tinctures in boyling with simple Water. 'Tis true, they are not near so strong as their Macerations or Infusions. But the Comparative Advantage of the one ought not to sink the other.

'Tis likewise to be remark'd, that Plants, whose Vertue is lodg'd in a sharp Volatil Salt or Aromatical Oyl, ought not to be long boyl'd, lest their Spirituous Parts should evaporate. We had best never throw them in till the Decoction be coming off the Fire.

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There are other Plants, which, when too long boyled, give a coarse over-fixed Salt, such as Senna.

Bocbetums.

The Ingredients of Sudorific Decoctions generally are Woods, Roots and Barks. Sometimes we pour fresh Water upon the same Ingredients after the first Decoction; and make a second for ordinary Drinking under Sudorifick Diets. This is call'd a *Bocbetum*. We may add a little Cinnamon and Sugar to render them more agreeable. For the first Decoctions we generally order an Ounce of Wood to each Pound of Water, and boyl one half away. If there's no occasion for a *Bocbetum*, we may order two Ounces of Woods and three Drams of Cinnamon, to twelve Pound of Water to be boyl'd in to six, and sweetned with six Ounces, or half a Pound of Sugar.

Distilled Waters.

Distill'd Waters are the Product of Distillation. If the Vegetable Ingredients are too dry, we may sprinkle 'em with the Juice of the Plant, or macerate or infuse them in common Water: If we desire to draw an Oyl from them, 'tis advisable to put them into a Fermentation: If we desire a strong Water richly stock'd with the Parts of the Plant, we sprinkle them with their own Distill'd Water, and reiterate the Distillation several times. If the Herbs and Flowers are of a loose Texture, and apt to waste their volatil Parts by Evaporation, we distil 'em in a *Balneum Maria*, and moderate the Heat in proportion to their Smell's aptness to decay. Aromatick Plants having some fix'd Principles ought to be distill'd in a *Vesica*, and the Juice of Fruits in a *Balneum Maria*. Roots, Seeds, and Woods, macerated in Water, are proper for a *Vesica*. But if they are Distill'd dry, a Retort is more convenient.

Most of the Parts of Animals abounding in Phlegm should be Distill'd ju a *Balneum Maria*: If they are dry, or design'd for Volatil Salts or Spirits, we use a Retort.

'Tis an unaccountable thing, what some Authors approve, That the Ingredients of some Compound Distill'd Waters should be Bones, Horns, Gold, Pearl, Precious Stones, and such other Materials as afford no Volatil Parts, and can never mount the Alembic. If

we

we add Musk, 'tis best to put it into the Desk of the Alembic.

Waters drawn after Fermentation are generally the most Volatil, Spirituous, and richly laden with the Principles of Plants. But Plants of a thin Texture are improper for Fermentation : The most effectual way of extracting their Principles being to cohobate the Distilled Water upon fresh beaten Ingredients.

Simple Water is not the only Menstruum for Distillations. When we desire Oily Spirituous parts, we make use of Wine, and sometimes Brandy or Spirit of Wine ; witness Cinnamon and Treacle-water.

Van Helmont declaims against all Phlegmatic Waters drawn from Plants. But he's mistaken. Tho' some Plants over-pour'd with fix'd Salts will part with none of their Principles ; yet there's a great many besides that are richly stock'd with Volatil Salts, as appears by their Water's precipitating the Solution of *Sublimatum*.

When we infuse Aromatick Plants in common Water, we may add some Salt or Yest to ferment 'em. Thus the Oyl mixes, as 'twere, with the other Principles, and the Distill'd Water is much better'd.

A Julep is a Potion made up of a Liquor, Syrup and *Juleps*, Sugar ; sometimes we may add other Ingredients, but it must not be overstock'd. It ought to be palatable ; that so the Patient may take it as his ordinary Drink. The common Proportion is an Ounce or two of Sugar or Syrup to about a Pint of Liquor, a due Regard being had to the Patient's Relish. The Basis of the Liquor may be either simple Water, or any Alterative Decoction, or else Distill'd Waters. Sometimes we add Juices and Tinctures, as, for Instance, two Drams of the Tincture of Cinnamon to a Pint of Water. Sometimes we add acid Spirits, or some Salts. Some Juleps are made up of Conserves dissolv'd in a sufficient quantity of a Decoction or distill'd Water ; then filtrated and mix'd with a few Drops of the Spirit of Vitriol.

Some Juleps are made up thus : Take four or five Pugils of the Flowers of Violets, or Roses, or Mallows,

&c.

Gr. and sprinkle 'em with some Acid Spirit. Then throw in about a Pint of some proper Decoction, and when the Tincture is sufficiently extracted, strain it, and add to it an Ounce of some Syrup.

Generally we make use of the Decoction of Barley, because 'tis the thinnest. In Fevers, and all Distempers where the Blood is congeal'd or over-ferments, in these cases let Sugar and Syrups be sparingly us'd, because the Sugar is apt to turn sour and sharp, and render the Humors viscous. In burning Fevers we commonly prescribe purging Juleps, made up of the Decoction of Tamarinds, with a double quantity of Whey.

Spirit of Wine is frequently added to Juleps, especially Acid ones. In Pectoral Juleps, consisting of the Decoction of Liquorice, for their Basis, we frequently throw in Acid Spirits dulcify'd with the Spirit of Wine.

The Syrup of the Juice of Mulberries dissolv'd in some Liquor makes a particular sort of Julep, call'd in French *Moret*.

*Medicated
Wines.*

Medicated Wines are questionless very effectual Medicines. They are possess'd of the Medicinal Vertues by vertue of Fermentation, cold Infusion or Lixivation.

For Fermentation; we pour new Wine upon the Medicines; so that by its Fermenting Quality their Principles are disingag'd from their Bonds, and set at liberty. In the mean while we may add Metals or Minerals bruis'd small, and hung in the Vessel in a Bag. If they are not hung up, they'll fall to the bottom, and convey little or no Vertue to the Liquor. As for Herbs, Roots, Barks, &c. they ought to be cut, bruis'd, pulveriz'd, &c. else they will not part with their Vertues. In this fashion we are wont to make Wormwood-wine, Scurvygrass-wine, &c. The Quantity of Wine ought always to be four, five, or six times more than that of the Medicines.

Beer also may be impregnated with Medicinal Vertues, by throwing in other Herbs together with the Hops, or else by adding them while 'tis a working.

The Juices of Fruits or Plants mix'd with Medicines will ferment after the same manner, and purchase the same Vertues.

Wine

Wine ought not to be boyl'd with Medicines upon the Fire, because its Subtile Parts are sure to evaporate. Neither are they to be infus'd very hot, a cold Infusion being sufficient. Thus *Crocus Metallorum* macerated for twenty four Hours in Wine, renders it extremely Emetic, and proper to dissolve Humours, especially as a Collyrium for the Eyes. Most Plants will impart their Vertue to Wine, whether their Powder be steep'd in it, or their slic'd and bruis'd parts digested with it, or put into a Bag in a Bottle. Such Wines are particularly serviceable in Chronical Distempers, especially if Steel be added to the Specific Ingredients, because the Tartar of the Wine opens its Substance. When Emeticks or Purgatives are infus'd, we must be more careful to adjust the Doses, than we need to be in other Cases. As for Lixives, or mixing of Wine with the Ashes of burnt Ingredients, they are already accounted for. I'll only add, that our ordinary Practice might be much improv'd, if Medicated Wines were more look'd after.

Wine impregnated only with Spices and Sugar, and strain'd and dulcify'd, is call'd *Vinum Hippocraticum*.

The Basis of any medicated Vinegar is Vinegar of *Medicated* Wine as being much the best. Notwithstanding that 'tis *Vinegar* the product of the Exaltation of the acid and tartarous parts, yet it contains also volatil and sulphureous particles. For, if we mix it with Coral, or the Ashes of Lead, it becomes sweet, and by Distillation thro' a Retort upon a slow Fire yields a true Spirit of Wine.

We generally take the dry'd Herbs, and chop 'em a little; then we put 'em into a Glas Bottle, and fill it up with simple or distilled Vinegar. The Bottle we expose to the Sun, or set in some moderate Heat.

Distill'd Vinegar being less embarrass'd with earthy parts, receives the Vertue of the Simples better than the common Vinegar.

Some Authors order Vinegar impregnated with Spices to be distill'd: But the Injunction is ridiculous; because the subtile parts of the Spices are so fix'd by the Acid of the Vinegar, that they cannot raise themselves in the Distillation. Therefore 'twere better to
distil

distil the Vinegar before the Infusion of the Spices.

Aromaticall Vinegar is an admirable Medicine. If we may credit *Deleboe Sylvius* his Testimony, 'tis much the best preservative against the Plague.

Sometimes we impregnate Vinegar with vomiting, purging, or narcotic Ingredients, joyn'd to other Simples, and adjust the Dose according to the quantity of the Ingredients.

For Alterative Vinegars, the common Dose is a Spoonful, either by its self, or mix'd with other potions.

Oxymel.

Oxymel is made thus. Take four Pound of Hony, skim it, and add two Pound of Vinegar; Reduce it by a gentle Boyling to the Consistence of a Syrup. Oxymel of Squills consisting of equal quantities of skimm'd Hony and Vinegar of Squills, is recommended against Obstructions and the Diseases of the Head. But this form of Remedies is now in disuse. Their room is more conveniently supplied by others. Three Ounces, their ordinary Dose, is an unpleasant Draught. Besides, they do not prove so effectual, as some may expect. Oxymels made up with black Hellebor prove Emetic; and an Ounce given with any other Potion is their highest Dose.

Hydromel.

Hydromel, or Mead, is a mixture of Water and Hony boyl'd together. Sometimes 'tis made like a Pilsane. As if we should take several Quarts of Water, and boyl it with some Handfuls of Plants, adding after some time an Ounce of white Hony for every Quart of Liquor. Some make a sort of Mead like Wine, thus. Take four or five times as much Water as Hony; Boyl 'em together, and skim 'em. Try when a raw Egg will swim in it, and then pour it into a Vessel to be set forty Days in the Sun, or in some hot place, till its Fermentation be altogether over. In the mean time we may render 'em Cephalic, or Pectoral, by the addition of proper Ingredients. The English make a sort of Mead call'd *Metbeglim*, by adding a little yeast in a Bag to promote the Fermentation, together with some Spices, especially Cinnamon, Pepper, Ginger, and Cloves.

A Syrup is a Decoction or Juice boyl'd with Hony or Sugar: If it be right done, a Drop of it put upon Marble will not spread it self. The end we aim at in making 'em, is to preserve the Vertue of Medicines for some time, because we have 'em not always fresh ; and withal to make 'em palatable. A Syrup is only a sort of Liquid Conserve ; and indeed, the large quantity of Sugar or Hony added to give 'em a due Consistence, do's in some measure stifle the Vertue of the Medicine. For whether we make it by Infusion, Decoction, or expressing the Juice ; we still add almost as much Sugar as there is strain'd Liquor. 'Tis true, such Juices and Decoctions as are somewhat thick and glutinous may be put off with less ; but in other cases the General Rule is, equal quantities of each.

Instead of Sugar we frequently add Hony or Juice of Liquorice. All the World know's that Syrups must be skim'd, especially those made with Hony. Afterwards they must be clarify'd, and kept in some cool Place: When Syrups are not to be long kept, we need not give 'em so thick a Consistence, and so half the quantity of Sugar will serve. And indeed such Syrups are better than others, because their Vertue is not so much controul'd by the Sugar. But at the same time they will not keep near so well.

Alterative Syrups for the Cough, Phtisic and Distempers of the Breast, are administred either by themselves or in Juleps and Decoctions. Their Dose is from one to three Ounces. When they're taken by themselves, we generally give a spoonful.

The Dose of vomiting and purging Syrups must be more nicely adjustd, than that of others. The quantity and force of the Emetic or Purgative Ingredients, whether infus'd or Boyl'd, do's only determine it. We have a great many such kept ready made in the Shops. But a Physician may prescribe fresh ones at Pleasure.

Potions are the mixture of Purgative or Alterative Ingredients in any Liquor. They differ from Juleps. 'Tis true, all Juleps are Potions ; but at the same time the Word *Potion* is *καὶ ἰζόχνη*, attributed to liquors wherein some nauseous Electuary is dissolv'd. The com-

mon Liquors for this purpose are Decoctions, Infusions, distill'd Waters, and Whey.

The Ingredients to be mix'd or dissolv'd are Powders, Electuaries, Extracts, Salts, Cassia, or Manna.

Purgative and Alterative Potions are administred in a different manner. The former are taken all at once or twice: The latter are given by spoonfuls at several times.

We generally add half an Ounce of Electuary, and an Ounce of Syrup, to six Ounces of the Decoction or Infusion, as one dose. If the Patient be fatigu'd with thick nauseous Potions we may add less. If Powders are made use of, they ought not to exceed a Dram and a half; neither are Electuaries proper at the same time.

Alterative Potions may safely receive more than the above-mention'd quantity, because they're given in small Doses. Sometimes we put a Dram of Extract, two of Electuary, and two of Powder, to six Ounces of distill'd Waters. We may likewise add an Ounce, or half an Ounce of Spirituous Waters, or a few Drams of some Spirit, with an Ounce and a half or two Ounces of Syrup. But such Portions must be parcell'd out into small quantities.

Oftentimes Purgative Potions are made without either Electuary or Syrup. As if the Pith of Cassia, Senna and Manna were boyl'd in Water or Whey. As for Example: Take three Ounces of Cassia together with the Seeds, Boyl them in half a Pint of Water. When ye take it off the Fire, infuse half an Ounce of Senna: Strain it, and dissolve an Ounce of Manna. The Marrow or Pulp of Cassia makes the Lotion as thick and unpleasant as any Electuary. Four Ounces of Cassia in the Reeds will yield an Ounce of Pulp, which is reckon'd equivalent to three Ounces of the Pith and Seeds. Sometimes Purgative Extracts are likewise dissolv'd in Potions.

When we attempt to dissolve any Rosin in a Potion, we must take care not to mix it immediately with the Water, lest it cause a Coagulation. It must be joyn'd first with some Oyl or the Yelk of an Egg.

Accord.

Accordingly, Scammony being a Rosinous Body, needs some other *Medium* to dissolve it, such as some Syrup, or the Juice of Liquorice, or the Yolk of an Egg, &c. especially if the Liquor be hot; for then it congeals extremely. Cold Water is not so liable to that Inconvenience, for the Powder only seems to swim in it. But Scammony prepar'd with Oyl of Tartar and Spirit of Wine is in effect render'd soluble, and then it needs no dissolving Body.

Emulsions are Liquors turn'd to the Colour of Milk, *Emulsions.* by Seeds or Almonds bruis'd and beaten, while the Liquor is gradually pour'd in to dissolve 'em. To this Purpose we use Almonds, Pistick-nuts, Pine-kernels, Peach and Apricock-kernels, the four cold Seeds, white Poppy-seed, and those of Citrons, Lettuce, Purslain, Columbines, and such as contain a watry Liquor, dissolvable by Water.

The Liquors made use of for this purpose ought to be Watry and pleasant. Such are simple Water; Barly Water, and distill'd Waters. Sometimes we add to the Emulsion prepar'd Crabs Eyes, Bezoar Mineral, prepar'd Pearl, &c. The common Dose of Emulsions is three or four Ounces. When we make for several doses we double or treble the quantity at Pleasure. But we seldom make more than three doses at once, because they will not keep. Each Dose must be taken at four Hours distance from the other; because they weaken the Ferment of the Stomac, and unbend its Fibres. A Dram of Seeds is enough to an Ounce of Liquor; and a Dram of Powders to be dissolv'd is enough for one Dose of the Emulsion.

We sweeten 'em with Sugar, or the pearl'd Sugar of Roses, or some Syrup. An Ounce of Syrup or six Drams of Sugar will suffice for one Dose.

Sometimes we add Nitre or Sal Prunel; but we always take care to keep out acids, because they throw the Milky Substance to the bottom,

An Emulsion made only of Almonds and Sugar, is call'd the Milk of Almonds.

Sometimes we prepare Purgative Emulsions of wild Saffron-seeds, or a Scruple of Scammony bruis'd with a

Spoonful of Citron Juice, or Succory Water, till it becomes Milky. We separate the white Liquor from the Remainder at bottom, and mix it in any other Draught.

We may likewise beat up Ten or Twelve Grains of some Purgative Rosin with the four Cold Seeds, pouring in by drops some Distill'd Water, and adding a Purgative Syrup.

Sometimes we make up Eumlions of two or three Drams of Turpentine beaten with the Yolk of an Egg, Water, and a little Sugar. But they are very nauseous, and seldom us'd, unless for such as have Ulcers in the Kidneys, and cannot take down a Bolus.

Tinctures.

Tinctures are the Solution of the subtle Parts of a Medicine in some convenient Vehicle. Fruits, Rosinous Roots, Barks, &c. and sometimes Flowers and thickned Juices demand Spirit of Wine as their proper Menstruum.

Some Flowers that have little Sulphur may be infus'd in Water; and their Tinctures made green or red by the adding of fix'd Alkali's or Acids.

When we take the Spirit drawn by Fermentation from a Plant or Flower, and imploy it as a Menstruum to Extract the Principles of the same Plant or Flower; then the Tincture is call'd an *Essence*. Metals open'd by Acid Spirits or strong Calcinations will likewise yield Tinctures. The Vitriol of Steel calcined, and mix'd with the Solution of Lead in Vinegar, affords an incomparable Tincture: It appears red, and if exalted with Spirit of Wine proves much more effectual. Purgative Ingredients mix'd with Spirit of Wine give Purgative Tinctures. Thus we draw a Golden Tincture from Coloquintida. But we must take care how we mix these Tinctures with watery Liquors, because the Rosinous Sulphur oftentimes precipitates. To avoid this inconvenience, we first mix 'em with Powders and a little Sugar or Syrup; which prevent the Coagulation. The Dose of such Tinctures seldom exceeds a Dram or two, and therefore we may conveniently mix 'em with Electuaries.

If the Ingredients are numerous, or if the Tincture be Extracted with Heat or Circulation, it is call'd an Elixyr.

When we Evaporat a Tincture, the remainder is call'd an Extract : Of which more under the Head of the *Solid Forms*.

Oyls are Prepar'd by Expression, Distillation, or Oyls, Decoction. Those by Expression are given both inwardly and outwardly. Such are the Oyl of Wallnuts, Oyls of sweet and bitter Almonds, of Olives, &c.

Distill'd Oyls are Drawn either with a Retort, or an Alembic, or *per Descensum*. All of 'em may be administered both inwardly and outwardly.

Such Oyls as are made by Decoction, or Digestion, are mostly us'd Externally. The way of making Express'd and Distill'd Oyls is accounted for above. As for the other Compounded Oyls we shall have occasion to speak of 'em under the Head of *External Medicines*.

A Ptisane is a Decoction of Barly. We put a handful of Barly to a pint of Water, and let 'em boyl till the Barly burst. Sometimes we add Quitchgrass, Liquorice, or Raisins. *Ptisane.*

The more simple a Ptisane is, the more proper 'tis for Fevers ; for a Compounded one promotes the Fermentation of the Blood. For my part, I generally choose only to dissolve some mix'd Salt from two Scruples to a Dram in a Pint of Water, with a stick of Liquorice. In Fevers I prefer this mixture to any Ptisane.

Hydrofaccharum, or a Syrup of Sugar and Water is more delicious than Mead. We generally put twelve parts of Water to one of Sugar. 'Tis only proper for such as are wont to drink Water. Those who are crouded wth acid Humours ought to avoid it, because it makes their Liquors too thick and glutinous. *Hydrofaccharum.*

Broth (as I intimated above) is a Decoction of Meat, or of the Parts of Animals. Sometimes we make Broth of Butter and Milk and Herbs. But such things are too common to require consideration. *Broth.*

Lock's, or Licking Medicines, are rather thicker than Syrups, They are made up of a medley of Extracts, *Lock's.* Elefquaries

Electuaries and Powders. They're order'd to be lick'd off a stick of Liquorice for the Disorders of the Lungs.

CH A P. XII.

Of External Liquid Forms.

*External
Liquid
Forms.*

THERE are several Liquid Forms order'd to be thrown into our Bodies, and yet are justly call'd External; because the Body throws 'em out again, before they can enter into Circulation. Such are Gargarisms, Clysters, Injections, Liquid Sneezing Medicines, and those which drain the Mouth.

Others are only applied outwardly. Such are Bathes, half Bathes, Fomentations, Epithemes, Liquors for Embrocation, Collyrium's, Oyls, Oxyrrhodinum's, Liniments, Balsams, and Fumigations.

Gargarisms.

Gargarisms are only distinguish'd from other Liquors, with which we wash the Month, by the manner of using 'em. They are design'd for scouring the bottom or lowest part of the Throat; therefore the Patient must hold 'em in his Mouth, and Gargle as long as he can without swallowing. Their Basis is common Water, or Distill'd Waters, or the Infusion or Decoction of proper Plants. The least quantity we prescribe is a Pound. And we always order the Juice of some Plant, or some Extract, or some Syrup to be dissolv'd in the Liquor. For the most part we pitch upon the Syrup of Wallnuts, or Mulberies for that purpose. Two or three Ounces of Syrup to a Pound of Liquor is a regular proportion. The Gargarisms are kept to wash the Throat with from time to time, before and after Meals, when 'tis Ulcerated or Inflam'd. When we design to beat back the Humours and bind up the Passages, we use 'em cold. When Ripening and Digesting is requir'd, they're always us'd warm.

We may add several other Ingredients both Solid and Liquid. As Honey, Vinegar, Allum, Vitriol, Nitre, Sugar, Acid Spirits, &c. But their Doses must be well adjusted.

When we make Decoctions for Gargarisms, the Ingredients which are Roots, Leaves, Fruits, Barks, &c. are vary'd according as the Indications require. Some are Astringent, some Discussive, some Ripening, some Cleansing, some Antiscorbutical, &c. We may likewise make Gargarisms of simple Mineral Waters, Whey, Milk, or Broth.

If the Ulcers or other disorders of the Mouth be seated forwards, 'tis needless to Gargle it; it being sufficient to hold the Liquor in the Mouth and move it to and again with the Tongue and Lips. But then it loses the Title of a Gargarism, and is call'd *Dia-clyfma*, or a wash for the Mouth.

However we must take equal care that the Ingredients of both be not too sharp or Acid, lest they Ulcerate or offend the Mouth. Therefore Pepper, Pellitory of Spain, Ginger, and Antiscorbutic Seeds, are only prescrib'd by Drams; Allum and Vitriol come much to the same quantity, and Acid Spirits are confin'd to a grateful Acidity. Sometimes indeed the Gargarisms are made very sharp on purpose to draw a great deal of Phlegm from the Mouth; but then they are call'd *Apophlegmatisms*.

Clysters are Liquid Medicines injected into the Guts. There are three kinds of 'em; namely, the Nourishing, the Alterative, and the Purgative. *Clysters.*

The Nourishing sort may be made of Broth, Milk, Sugar, &c.

The Alterative and Purgative Clysters, their Liquid Basis is a Decoction or Wine, or some such thing. In which we may dissolve Honey, Electuaries, and Oyls, in pursuance of the various Indications.

If moisture and softness be wanting, we make use of the Decoctions of Emollient Herbs; if coolness, those of cooling Herbs, to which we may add Salts, as Nitre, Sal Prunel, &c. If Wind disturb the Patient, we order hot Ingredients. If Purgation be desir'd,

we throw in the Leaves of Senna, Wild Saffron-seeds, &c. But their quantity must be very reasonable.

The Dose of the Decoction or Liquor is uncertain; by reason of the various circumstances of Patients. For Children five or six Ounces is the highest measure; for Big-belly'd Women less than a Pound will serve: For other Persons, especially such as are Hydropical, or infested by Worms, we may rise to some Ounces above a Pound; for their Guts are generally large, and free from constraints.

For one Decoction we may order Roots to two Ounces; Leaves to two Handfuls, and Seeds to two or three Drams; providing the Roots and Leaves be not Purgative. If they are, their Dose must be taken down to that of the Seeds. Common Honey may be added from one Ounce to four; Other sorts of Honey to one or two Ounces, and Purgative Elestuaries to an Ounce, providing the Persons are adult.

Oyls are generally prescrib'd to two or three Ounces. Sometimes indeed the quantity of the Oyl is equal to that of the Decoction.

Oftentimes we order Turpentine to be dissolv'd in Clysters, either with Oyls, or the Yolk of an Egg; and when the Ferments of the first Passages withstand their Hypnotic Vertue, we throw in a few Grains of Opium. I have frequently observ'd that two or three Grains of Opium in a Clyster have procur'd Sleep, when five or six taken at the Mouth were of no effect. In Hypochondriacal Diseases, sometimes Opium taken either way causes Vomiting. Emetic Wine added to Clysters, in a large quantity, is very effectual for clearing of the Heart, and Clysters of Urine are very proper for the same purpose.

Purgative and strong Clysters are made such by the Addition of the Decoction of Coloquintida, and Sal Gem. This Salt is used in smaller Doses than the other; a Dram to be dissolv'd in the Liquor being the common Gauge. Hiera's and purgative Elestuaries are also proper to be dissolv'd in Clysters. But their Operation is far short of what we observe when they're taken

taken into the Stomach. Therefore their Dose is larger in Clysters than in Potions.

The Oyls added to Clysters are not only serviceable to mollifie, but likewise to preserve an equal Smoothness upon the Inside of the Gut. By this means the Costiveness that follows the frequent Injection of Clysters, is effectually prevented. As for Examples of Anodyn, Astringent, Carminative, Scouring, Purgative, and Vomiting Clysters, I shall have occasion to give 'em hereafter.

Sometimes we give Clysters of Oyl alone, or of Wine alone, or of both together. The first are proper when the Excrements are harden'd: The Second, I mean those of Hot Wine, expel Wind: The last, viz. Those of Wine and Oyl mix'd together; these, I say, take place, when the two above-mention'd Cases are complicated together. However we must still remember that Clysters of Wine ought to be avoided in Fevers, because they occasion Doating.

The Decoction of Mad-Night-shade and Thorn-Apple given by way of Clyster causes a Doating for some Hours. Clysters of Urine are very proper for the Tympany, windy Cholic, and Hypochondriacal Disorders. But the Urine must be either that of a Person who drinks Wine, or of a Healthy Child.

In purging Clysters Oyl is an improper Ingredient; because it cramps the Purgatives, and covers the sharp Salts.

In Narcotic Clysters Opium may be shifted for the Syrup *Diacadium*. If after such Clysters the person be overwhelm'd with Sleep, we inject others of Malmsey-wine, or dissolv'd Venice Treacle, or of some such hot and active Ingredients.

In Dysenteries we sometimes joyn the Balsam of Sulphur Terebinthinate to the Narcotic Ingredients.

'Tis observ'd that in Dysenteries, Inflammations of the Guts, &c. the frequent Injection of Clysters is very prejudicial, by reason of their irritating Force.

Clysters

Clysters of the Smoak of Tobacco are very purging. *Bartholin* describes a particular Instrument for injecting of 'em, *Hist. Anat.* 66. Cent. 6.

Sometimes we may make up Clysters against the Vapors, by adding to the Decoctions Antihysterical Ingredients, viz. Feverfew, Mugwort, &c. together with some drops of the Oyl of Amber, and Camphyr to be frequently extinguish'd. *Tripbera Persica* and the *Hiera's* are also not improper.

The Influence of Opium, Wine, &c. are sufficient proof that several parts of Medicines given in Clysters do enter the Veins; and since Experience vouches, that there are milky Vessels inserted into the great Guts, we cannot in reason doubt the usefulness of nourishing Clysters.

Injections.

Injections are variously calculated for the parts that require 'em. Clysters are nothing else but Injections into the Guts. Besides, the Nostrils, Ears, Yard, Bladder, Womb, and all parts subject to Fistulous Ulcers, require respective Injections.

The Indications demanding Injections are likewise very different. Inflammations, Imposthumes, and calous Ulcers do equally call for 'em. They are at once proper for the abating of Pain, cutting and disengaging Glutinous Humours, removing Deafness, promoting the Expulsion of a false Conception or of the After-birth, and stopping a running of Seminal matter. Now questionless the proper Forms of all these Injections must be widely different, both in regard to the Choice of Medicines, and the manner of using 'em.

Those for the Ear ought to be injected by Drops, and in all must not exceed three or four Drops. After the Injection is over, the Ear ought to be stop'd with perfum'd Cotton. If we happen to inject more than the above-mention'd Quality, let the Person lean his Head on one side that it may run out. Since the quantity injected at once is so small, we ought not to prescribe above an Ounce or two of Liquor. 'Twill be easy to adjust the quantity, if we consider how often the Injection is to be repeated. The Liquor may be either hot, warm or cold, according as the Indications
and

and the Ingredients will require. To every Ounce of Liquor we may add a Dram of Hony, Volatil or Sulphureous Spirits, Salts, &c. Decoctions, Juices of Plants, Oyls, distill'd Waters, &c. are proper for the purpose. For Example. In Inflammations of the Ears requiring to be soften'd and brought to a Head, we would prescribe half an Ounce of the Decoction of Barly, and as much of the Oyl of sweet Almonds. For recent Inflammations, we would order an Ounce of the Water of Frogs Spawn together with half a Dram of Nitre, If the Ears are stuff'd with purulent matter, and want to be cleans'd; in that case *Forestus* recommends the Juice of Onyons with Hony of Roses; some choose Whey mix'd with a third part Hony; others the Solution of Aloes in some Vulnerary Decoction; and others again prefer Urine. To take off the Excrements that block up the Internal passage, 'twill be proper to inject the Decoction or Expression of Wormwood, whetted with a little of the Tincture of Castor. But I shall not attempt to recount the infinite Variety of Medicines prescrib'd upon such occasions.

To pass on to the Injections for the Nose. Their whole design is to mundify the ulcers of the Nostrils, and take off the harden'd or corrupt Excrements lodg'd within 'em. Vulnerary and Abstergent Ingredients will answer the first, and Emollients will satisfy the last Indication. In both cases we must take equal care that the Materials be not harsh nor corrosive; Because the injected Liquor oftentimes falls into the Mouth, and may come to be swallowed. The quantity of the Liquor injected at one time ought not to exceed two Ounces. It ought to be rather lukewarm than cold. And we must endeavour to put the Syringe as far up as 'tis possible, especially if the disorder be seated in the Cavity under the Eye-brows.

Vulnerary or Emollient Decoctions, sharpen'd with a Dram or two of the Spirit of Wine, may be prescrib'd for Injection into the Nose; or else we may take two Ounces of Vulnerary distill'd Waters, and dissolve in 'em a Dram of Sal Armoniac, or half a Dram of green or white Vitrol. If we mean only to moisten and
dis-

disengage the Excrements we may take half Water half Wine, and Inject it warm into the Nostrils. Lime-water and several other Liquors are proper for the same use.

I am now come up to the Injections for the Womb or Vagina: They are perform'd with a Woman's Syringe. The Liquor ought to be lukewarm. The Woman should be laid upon a Bed with a Bason or Cloth underneath her, and continue so for some time to prevent the efflux of the Liquor, which may be injected to four Ounces every time. If pain invades the Part, we make use of Milk and Anodynes. If it be infested by fleshy Tumors, we add the Leaves of *Solanum Maniacum* to the Decoction; If the part be gall'd, we add consolidating Ingredients, such as Comfrey, and dissolve in every Ounce of the Decoction a Dram of the Hony of Mercury. If the Part be inflam'd, we inject the Decoction of Houleek with Chamomil and Elder Flowers, adding to every Ounce three grains of the Sugar of Lead.

For a falling down of the Womb we order a Decoction of Tormentil, red Roses, Pomgranat-flowers, Pomgranat-rindes, Sumac Seeds, and other Astringents. These we order to be boyl'd in Water. In this Decoction we extinguish a hot Iron several times, and add to it harsh red Wine, and the Syrup of dry'd Roses, in the same quantity as that of Hony, when us'd. We may steep a Sponge in this Liquor, and let it lye for some time in the Vagina.

When we want to open the internal Orifice of the Womb, to make way for the Terms or After-birth, we prescribe Decoctions of Feverfew, Mugwort, Savin, Coloquintida; adding to every three Ounces thirty Drops of Bull's Gall, and a Dram of some Volatil Spirit.

But in this case there's nothing so proper as *Glauber's Instrument*; 'tis made in the form of a long Pipe, round at the Head, with a little Hole bor'd into it. To this Pipe is added a round Body like an Apple, which opens and shuts. Now by means of this Instrument we may put up a Sponge soak'd in the Spirit of Sal Armoniac, or a round Ball of Sal Armoniac mix'd

mix'd with Salt of Tartar. Thus the Vapors being convey'd to the part, and being of themselves subtil and keen, will open the Passage.

As for Liquors injected into the Yard, they seldom reach the Bladder, unless convey'd thither by a hollow Probe; which I cannot much approve of, if the Neck of the Bladder be gall'd, by reason of the Irritation. Indeed, when thick Slime is to be dissolv'd, such an Instrument may be safely us'd; not otherwise. The Liquor to be injected may be a thin Vulnerary Decoction of the Leaves of Plantan and Agrimony, with half a Dram of the Oyl of Tartar, and a few drops of the Oyl of Turpentine dissolv'd in it. The Decoction must be thin and weak, and injected warm.

If the Pain be violent, or the part inflam'd, we may try to inject, without the Probe, Plantan or Houleek-water with Sugar of Lead, and Troches Alkekengi. Sometimes we may add Opium to the quantity of a Dram for every Injection. If the Suppression put us under a Necessity of using a Probe, we may inject this Liquor at the same time.

Sometimes when the Bladder is ulcerated, we may inject an Emulsion of Turpentine: But we have reason to fear that the Acid of the Urine will curdle 'em.

For Ulcers of the Yard, and fortifying of the Seminary Vessels, there's nothing so proper as the Solution of some Vitriolic Preparations in a convenient Vehicle. I shall have occasion to furnish you with Examples in the following parts of this Discourse.

As touching hollow and winding Ulcers, their Injections keep to the common road. Their Quantities must be enlarg'd or diminish'd in proportion to the Capacity of the Ulcer. The strongest vulnerary Ingredients must be pick'd out. Some commend the Decoction of Grouddivy, Birthwort and Tobacco; whetted with a few Drams of the Tinctures of Aloes and Myrrh. Sometimes we use Lime-water and *Aqua Phagedenica* mix'd with others. Sometimes we add Hony, Vitriol, Alum, Salt of Tartar or a little Caustic Powder.

Sneez-

*Sneezing Li-
quors.*

Sneezing Liquors are Decoctions either us'd simply by themselves, or in Conjunction with the Juices of Plants. We pour 'em upon the Palm of the Hand and suck 'em up from thence. Their Vertue consists in carrying off the Slime and Snot. But I find 'em much inferior to Injections.

To this purpose we generally use the Juices of Pimpernel, red Beats, Sow-bread, and sometimes that of wild Cucumbers; but for the most part they're mix'd with some Water or Decoction. We may add the Decoctions of Betony, Sage, Marjoram, &c. and sometimes Syrups together with the Spirit of Wine to make 'em more cleansing.

In my Opinion the only use these Liquors serve for, is that of having Tents or Pledgets dip'd in 'em, and put up into the Nose for an *Ozæna*. However we must always take care that sharp Juices do not injure those who have weak Eyes.

If these Juices were thicken'd, or mix'd with Powders, and reduc'd to the Consistence of an Electuary, or to some Solid Form, they would be more effectual than the Tents.

*Fumigati-
ons.*

A Fumigation implies, that the whole Body, or some part of it, is expos'd to receive the Steam of some Burning Medicines. Some Fumigations are Astringent; as when we fire half-dry'd Nettles with a hot Iron, and set ones Breech just above the Vessel to receive the Smoak. Some are Drying: As when we throw Frankincense, Mastick and Dragon's Blood upon Burning Coals, and dispose the Smoak to be receiv'd at the Mouth, for the drying up of a Cancer in the Mouth, the Head being at the same time cover'd over with a Cloth. Some are of a melting Quality. Thus the Troches of Mercury are burnt, and their Smoak convey'd to the Mouth or Breech, for the raising of a Salivation, or melting down callous Tumors in the Breech.

The Smoak of Hemlock is very softening. Its Plaister burnt will melt hard Swellings, if the part be expos'd to the Smoak.

The Steams or Smoak of Hyfterical Medicines may be very profitable to the Womb; as those of Anti-Dysen-

Dysenterical Ingredients are to the Fundament. When I come to speak of Specific Medicines accommodated to every part and its respective Distempers, I shall have occasion to give the various Forms of fumigating Prescriptions.

Of all Liquid Remedies that are only applied externally, doubtless a Bath is the most considerable, by Reason of its extream usefulness, and universal capacity to reach the whole Body.

There are two sorts of Baths. One made with Liquor; another with Steams.

When the Body is soak'd in Hot or Warm Liquor, the pores of the skin unbend, Transpiration becomes easy, and for the most part some parts of the Liquor penetrate into the mass of Blood and dissolve its saltish Particles.

In the beginning of a Hætic Fever a Bath of hot sweet Water may not be amiss; but its greatest efficacy is chiefly accommodated to Nephritic Pains, Hypochondriacal doatings, madness arising from the Womb, Venereal and Cuticular Distempers.

'Tis a surprising but true observation, that a Person tortur'd with a Nephritic Colic, being Plung'd into a Bath of warm Water, will find ease as 'twere in a Moment. The Reason is not obvious. Perhaps the unbending of the Skin may lessen the Compression of the Internal parts adjacent to the Kidneys. Or perhaps the Bath may introduce a new Sensation that destroys the other. Or else the Water penetrates to the Blood and dilates the passages for Urine.

Anodyn Baths will prove yet more effectual, if we boyl in the Water the Roots and Leaves of Emollient Plants. To two Pound of Roots we may put thirty handful of Leaves and an Ounce of Seeds. When pains are very violent, and the Body much dry'd and wither'd, 'twill not be improper to order Baths of common Oyl, or of three Parts Water and one part Oyl; or rather to prescribe those of Milk, which are of admirable use in Scorbutical Cases.

Those prescrib'd for the Scab, and Ulcers or other disorders of the Skin, ought to consist not only of the common

common Vulnerary Ingredients, but likewise of such as may impart a Vertue not unlike that of the Mineral Waters, which are famous in such Cases. For Example : We may throw into the Water a Pound of Quick-lime, and another of Brimstone. Sometimes we may order Sulphur and Allum to be boyl'd in River-water for the same purpose.

If 'twas the Infirmary of one particular part that required bathing, we may put some of the Ingredients into a Bag, and apply it to the part, or Rub it by way of Embrocation before the Person enter the Bath.

The Baths prescrib'd for the Pox, that is, to prepare for a Salivation, are generally continued Morning and Evening for Eight or Ten Days, in order to open the Pores of the Skin, to dissolve the Blood, and promote the penetration of Mercury. In these cases the Person ought not to bathe above two hours at a time.

But there are some Diseases that require the Person's Abode in the Bath as long as he is able. Such is Hypochondriacal Melancholy.

Baths of Hot Mineral Waters are excellent for a Numbness of the Nerves, or any Paralytic or Rheumatic Disposition; by reason they are largely stock'd with Alkaline Salts, that dissolve the congeal'd Blood.

On the contrary, the common Baths of simple Water, that are not able to dissolve the Concretions of the Blood, do only furnish it with Serosities; and sometimes are so far from diminishing the Distemper, that they render it more stubborn and rebellious.

*Baths of
Steams.*

A Person is said to bathe in Vapors or Steams when he's set in a hot place, surrounded with the Steams of a Decoction, exhaled by Heat. Decoctions are converted into Steam either by throwing 'em upon red hot Stones, or casting the Stones into the Vessel where they are, and placing it underneath the Patient; or by putting the Decoction into a Vessel that's extremely hot, and shifting it when it grows cold. To this purpose we use all the Ingredients that are serviceable in any Decoction.

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This sort of Bathing Stoves is more effectual, and procures Sweat more easily than the other Baths ; especially if the Person drink a Draught of some Sudorific Decoction before he enter 'em.

The proper Season for making use of these Stoves lies at a convenient Distance from ones Meals, by reason that they disturb Digestion.

When the Person comes out of the Stove, he must be rub'd and wip'd down, and laid into a good warm Bed ; and above all, avoid Cold, which cannot but prove very noxious at a time when the Pores are so open.

When the Person sits only up to his Navel in the *Half-bath*. Bath, we call it a Half-Bath. Which in some Cases is preferable to a whole one, either because the Disease nestles in the *Abdomen*, or that the Breast being weak, is in danger of being disorder'd. It claims a right to all the Vertues that the Universal Baths are possess'd of, excepting that of accounting for the Diseases which overspread the whole Shin and Body. It may be us'd twice or thrice a Day, observing still a due distance from the times of eating. Sometimes the Lees of Wine supply the Room of a Half-bath, and in the Gout, Rheumatism, &c. are more effectual than those of hot Water.

When a Person is set upon upon a Close-stool, and his inferior parts are expos'd to the Vapors of some Decoction ; this, I say, is a Half-bath of Vapors or Steams. Which is very serviceable for the Piles, Colic, Dysentery, Tenesmus, and the disorders of the Womb. For Instance : To provoke the Terms we may order the Decoction of the Regulus of Antimony its Dross, and Savin. To cure a Dysentery, that of Plantain, Mullein, &c. In fine, all the Remedies that are reckon'd Specifics for such Diseases may be us'd in this fashion.

A Fomentation is a hot or warm (seldom or never a cold) Liquor applied with a Sponge or Clout, or put into a Bladder and laid upon the Part. *Fomentations.*

To this purpose we make use of warm Water ; Water mix'd with Wine, Vinegar or Oyl ; Decoctions of Roots, Leaves, Flowers, Seeds, &c. Lixives, Distill'd Waters, &c.

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The Quantity of the Liquor rises or falls in proportion to the largeness of the part. Oftentimes we prescribe about a Pint of boiling Milk in a Bladder to be applied to the Belly for Colic Pains. When we apply the Liquor with Clouts, Rags, or a Sponge, we choose 'em big or small as the part requires. Thus; for the Eye; we choose small rags, and prescribe only four Ounces of Liquor, to serve for Fomentation three or four times a-day. For the Stomach or Belly we order at least a Pint, if not a Quart of Liquor.

We may add to the Decoctions some Spirituous Waters, such as the Spirit of Wine; but not till they be taken off the Fire.

The proportion of the Liquor to the Ingredients must be so adjusted that it proves not too thick, nor yet too sharp, especially when 'tis to be applied to a sensible part, such as the Eye, or to any ulcerated Place.

'Tis worth observing, that in Fomentations for the Eyes Oyl is an improper Ingredient: At least we must be cautious of keeping it without the Eye-lids, lest it shut the crying Glandules, and prevent the evacuation of the Serum.

The Decoctions ought to be strain'd off from the Ingredients, because they would make it too thick.

Sometimes we dissolve in the Liquor Salts, Soap, Opium, &c. according as the Indications direct us. 'Tis needless to insist on the Doses of all the Particular Ingredients. A Physician acquainted with the *Materia Medica* may easily adjust 'em. The more Active Ingredients require the strictest notice. For Example: Suppose 'twere about a Pint of Decoction; If we add Vinegar, two or three Ounces will serve; If Spirit of Wine be desir'd, an Ounce or two is its proportion; If a Volatil Spirit, two Drams or half an Ounce is a just Dose; if Wine, a fourth or third part of the whole; if Oyl, three or four Ounces: If we add soap, the Rule is, when the Water becomes white there's enough. If Allum, or any other Salt come into the Bargain, two Drams is their Dose.

If the Fomentation be made up of Cordial and Spi- *Epithemes*.
rituous Waters, or Decoctions of Cordial Ingredients,
to be applied to any considerable part, 'tis Christen'd
a Liquid *Epitheme*. To such Liquors we may add White
Wine or Vinegar impregnated with Aromatic or Cor-
dial Plants; or dissolve in 'em Cordial Confections and
Powders.

An Epitheme must be frequently, as 'twere every
minute applied, and upon that score differs from Fo-
mentations. To a Pound of Liquor we generally put
half an Ounce of Powders, an Ounce of Electuaries,
and Spirits according to the Degree of their strength;
as for Example; half an Ounce or an Ounce of Spirit
of Wine, a Dram of the Spirit of Sal Armoniac or of
any Volatil Spirit.

Epithemes may be applied to the Head and Testicles,
for Bleedings, Headaches, Drunkenness, &c. Some-
times we add to 'em the Juices of Nightshade, House-
leek, Water-lillies, &c. or the Juice of Crabs drawn
with Venegar, or the Water of Frogs spawn together
with Sugar of Lead.

As for Embrocation and Irrigation, properly they *Embroca-*
are not Forms of Medicines, but particular ways of *tion*.
applying them. An Irrigation implies, that a Liquid
Medicine is let fall like Rain upon the part af-
fected.

An *Embrocation* imports, That we apply a Liquid
Medicine with Wool or Linnen, or with our Fingers,
and at the same time rub the part to promote the pe-
netrating Vertue of the Medicine. In this fashion we
make use of Decoctions, Juices, and Waters; but al-
ways add Oyl to 'em, to make 'em stick upon the part;
for a soft Medicine lies closer, and is a more proper
Subject for the rubbing Motion that procures Access
to the part.

After this manner of Application we must cover up
the part with a Rag, or Flax, spread over with the
same Medicine.

Oxyrrhodinum is a sort of Embrocation of three parts *Oxyrrhodi-*
Oyl of Roses, and one of Vinegar; to which we may *num*.
add Juices, or distill'd Cephalick Waters. Sometimes

we lessen the quantity of the Oyl or Vinegar. This Remedy was peculiarly provided for the Head, especially for the anointing of the Forehead and Temples, in a Phrensy, Head-ach, &c. But now 'tis scarce us'd for the Phrensy, for fear it should shut the Pores of the Skin. And indeed its room is better supplied by living Animals cut up and applied; or by Fomentations of the Water of Frog's Spawn, Aromatical Spirits, &c.

Lotions.

Lotions are Baths provided for particular Parts, especially the Head and Feet.

Those for the Head may be made of Cephalic or Aromatical Decoctions; to which, if we want to dry up Humours, we may add Sulphur. Lixives are also proper for the same purpose. Usually we put half an Ounce, or six Drams of the Ashes of Vine-twigs to a Pound of Water; and, after 'tis made hot, apply it by way of Lotion, according as the Disease requires. We may likewise add some Spirituous Waters, or Volatil Spirits, so their quantity be very moderate. Sometimes Natural or Artificial Salts are not amiss. The usual time of washing the Head is in the Morning, about two Hours before Breakfast.

The Feet may be wash'd at any time; at Night, if we will. Lotions are proper for all the Diseases that nestle in the parts to which they're applied. But those for the Feet have a peculiar Vertue to benefit remote parts. They invite the Humours to the Inferiour Parts, especially if the Liquor have a due degree of Heat; and by diverting 'em from the upper Region, suppress Doatings: They moderate the Motion of the Blood in the Head, and procure Sleep: They retrieve the Flux of the Terms, and promote the descending Motion of the Humours. In Doatings or extream Watchfulness, we make use of the Decoctions of Narcotic or cooling things in common Water: In a Suppression of the Terms we choose Aromatical and Histerical Ingredients, or rather a strong Lye. If the Smell of ones Feet be offensive, the common Lotions will be serviceable. Sometimes we apply 'em to the Arm-pits for the same Reason: To this purpose the
Solution

Solution of Litharge in Vinegar, frequently apply'd with a Sponge, is found most effectual.

The meaning of *Collyrium* may be extended to all *Liquid Collyrium's*. Medicines for the Eyes, but Liquors and Steams design'd for that Service more properly ingross the word.

The Vapors of some Medicines are serviceable in dissolving Films or webs upon the Eyes. But their Vertue is better convey'd, if a Person chew the Medicine, and while 'tis in his Mouth Breath upon the Eye. A little Glas fill'd with some penetrating Spirit, and frequently held to the Eye, will procure the same effect.

The other sorts of *Collyrium's* are either Liniments, or Perfect Liquors. The Basis of the latter is either Wine, distill'd Waters, or common Water. The Ingredients are some subtle penetrating Medicines that give a Tincture to the Liquor. Plants, Minerals, Gall, Urine, &c. are the common Materials. They are expos'd to the heat of the Sun, or cover'd in a Dung-hill several Days, that their Vertue may be the better extract'd. When I come up to the Ophthalmic Medicines I shall furnish you with several Examples. In the mean time 'tis not improper to observe that Troches and Powders are frequently added to such mixtures, at the rate of two Drams to four Ounces, providing they be not more active than ordinary. Some indeed are extream strong, and a few Grains is their highest proportion. However all Corrosive Powders must be avoided.

Collyrium's of the Consistence of Hony, are made up of Powders pulveris'd very fine upon a Porphyry, and incorporated with Mucilages, Hony, Butter, &c. The Mucilage of Quinces is frequently us'd for this purpose, as also the whites of Eggs beaten up with Allum. And indeed they are not improper.

Cataplasms for the Eyes are made of the Pulp of Apples, or Crums of Bread boyl'd in Rose-water mix'd with Saffron, and sometimes a little Opium and Camphyr. As for Milk and Oyls I always found 'em of no great use to the Eyes. This subject shall be treated more at length, under the Head of *Ophthalmic Medicines*,

Distill'd
Oyls.

In the foregoing Chapter. I explain'd the several ways of drawing of Oyls. And now since they're us'd outwardly, as well as inwardly, I think 'twill not be improper to Instance in a few Examples.

Distill'd Oyls are drawn either in a Still or in a Retort. The former Oyls are more clear and light. The Ingredients they are drawn from are Woods, Barks, dry Leaves, Flowers, Fruits, &c. Which ought to digest and ferment some time in Hot Water; and common Salt or Salt of Tartar ought to be added to promote the Separation of the Oyl. Sometimes a little Yest will be needful to raise the Fermentation. Being thus prepar'd, they're distill'd in an Alembic or *Vesica*; with a brisk Fire at first, which brings over the Oyl, that we call *Essential*. If we distill Woods dry, or Amber, or Pit-coals, or Bitumen, we must make use of a Glas or Earthen Retort luted to a Receiver. And this way of distillation presents us first with a Phlegm like fair Water, then a Spirit like Clouds; and afterwards, when the fire is augmented, the Volatil Salts fasten upon the Neck of the Retort, and an Oyl comes over, which at first is clear, but towards the latter end grows black and Solid.

The Water is separated from the Oyl either by Filtration, or by means of Cotton dip'd in Oyl, or by a new Distillation of the whole, for then the Water and Spirits come first over.

Rosins yield their Oyl in a *Vesica*, being mix'd with a larger quantity of Water. Their Oyl is generally call'd the Spirit, and swims upon the Water. When the Oyl begins to turn less clear, we shift the Receiver for the Second Oyl, which is not so fine and clear as the first. As for Rosinous Gums we may distill 'em in a Retort upon a Fire of Sand. We fill the Retort to a third part, and if we fear their running together, throw in a little sand or Brick-dust.

Horns, Bones, and Claws are distill'd in a Retort upon a naked Fire. As for the other parts of Animals, I refer the Reader to what I have said upon distill'd Waters.

As touching Oyls prepar'd by Expression; sometimes we promote their separation, by heating the Ingredients, or moistening 'em with the Vapors of hot Water; after they are sufficiently bruised.

Oyls by Infusion or Decoction are made thus. We take the Green Herbs and chop 'em. Then we Boil 'em with Oyl, 'till their Moisture be evaporated; or else we take the dry'd Herbs, and set 'em to digest twenty four hours in Oyl in a *Balneum mariæ*. Some choose this way. *viz.* They fry the Herbs in Oyl 'till they become brown; then take 'em off with a Skimmer, and put in fresh ones; continuing thus to shift 'em 'till the Oyl be sufficiently Tinctur'd. The Oyl of Olives is generally imploy'd for these Purposes.

Liniments are Oyls thicken'd, so that they stick closer upon the part they're applied to. We may bring 'em to a due consistence without destroying their Liquidity, by mixing 'em with Mucilages, Powders, Butter, Fat, and Wax. *Liniments.*

These different Ingredients are added in different Doses. For Instance, We may put to an Ounce of Oyl, only a Dram of Wax; but the same quantity will admit of two Drams of Butter or Fat. And as for Powders, one Dram will be rather too much: And besides, they ought to be very penetrating, such as Castor pulveris'd, Camphyr, Saffron, &c. And touching Mucilages, we may put as much, and sometimes more than the quantity of the Oyl.

Oyls will incorporate with Butter and Fat, either by melting or mixing; but with Wax, only by melting; and with Mucilages and Powders by a simple mixing.

Sometimes we add to Liniments, the Balsam of Lead, or that of Sulphur, distill'd Oyls, and several other Medicines according as the Indications are.

The most considerable Indication is that of softening, and unbending the Fibres, and mitigating the Pain. To which purpose, we may add Anodyns, Narcotics, and even Opium it self. If we want to dissolve or attenuat Humours, Penetrating Ingredients will be needful. In such Cases, the Volatil Spirits,

Spirit of Wine, &c. mix'd with Oyls are very serviceable.

Sometimes we mix the Juices of Plants with Oyls ; or boyl the Plants in 'em till the moisture be Evaporated, and then work 'em up with Fat to the consistence of a Liniment or Ointment.

Balsams. 7

Balsam is an Equivocal word. 'Tis applied to three sorts of Medicines. The First may be styl'd Odoriferous Balsams : The Second Vulnerary, and the Third Distill'd.

An Odoriferous Balsam is a sort of Ointment, whose Basis is white Wax, Lamb Fat, Veal Marrow, and Sweat Oyls ; such as those of Sweet Almonds, Filberds, Nutmegs, &c. We Wash and Digest 'em all in Spirit of Wine, to take off any Smell that might remain. Then we melt 'em gently, and add Balsam of Peru ; or we may leave out that, and when we take 'em off the Fire, add distill'd Aromatical Oyls, that is, a few Scruples to each Ounce ; and afterwards a sufficient quantity of Ambergrease, Musk, Civet, and such like Odoriferous things. A few Grains of them will serve to an Ounce. These Balsams are very pleasant, and when applied to the Nose Fortifie the Spirits against Swoonings, Apoplexies, &c. Sometimes indeed they are apt to raise the Vapors.

Vulnerary Balsams are mostly made of Turpentine, and Vulnerary Gums and Rosins, dissolv'd in Vulnerary Oyls, especially that of St. Johnswort. To which we add the Tinctures of Aloes, Myrrh, and Birthwort in *Aqua Vita*, or Wine. Generally we put six or eight Ounces of Turpentine, or other Rosins, to a Pound of Oyl, and then add the Tinctures and Powders, and Boyl all up to the Consistence of a Balsam. We may add an equal quantity of Brimstone to the Oyl, and stir it with a Wooden Spatula till it become red. Then put two Ounces of Wax to two Pound of the Mixture, and when 'tis melted, take it off the Fire, and add half a Pound of the Tincture of Birthwort in Spirit of Wine, an Ounce of *Zwelfer's* Tincture of Steel, and half an Ounce of the Oyl of Myrrh ; remembring at the same time to stir it constantly at

a distance from the Fire till it come to the due Consistence.

Poterius, du Renou, Hellerius, and several of the Ancients order'd these Vulnerary Balsams to be drawn over a Retort, in order to render 'em more clear, Liquid, Active, &c.

Distill'd Balsams are sometimes Vulnerary. Thus Wine or Brandy mix'd with Vulnerary Ingredients, Oyls, Gums, and Turpentine, and Distill'd in a Retort, gives a Vulnerary Balsam. When they are design'd for Internal use, they are nothing else but Spirits, and Oyls drawn with the Spirit of Wine, by Tincture or Digestion, and Distillation. For Instance, Take a convenient quantity of Spices, or of the parts of Animals, make a Tincture of 'em, and Distill it several times in a Glass Retort, upon its own *Caput Mortuum*: Then mix it with Express'd or Distill'd Aromatic Oyls, and set all to Digest in a Pelican upon a Fire of Sand. Six or Seven Drops of such a Balsam may be given inwardly; and it may be applied outwardly to Fortifie the Parts.

C H A P. XIII.

Of Solid Internal Forms of Medicines.

Several Medicines are us'd in a dry Solid Form, that is, they are not dissolv'd in any Liquor. Such are Powders, Calcin'd Substances, Precipitats, Magisteries, Salts, Flowers, Extracts, Rosins, Troches, Pills, Electuaries, Confections, Conserves, Sweet-meats, Lozenges, Glasses, Regulus's, Frozen Crystals, Robs, &c.

Powders are Medicines reduc'd into small fine Particles. Some are us'd inwardly, others are only fit for external Application. The former are our present Subject. They are dignify'd with various Epithetes answerable to their Vertues. In General some Evacuate,

cuate, others Alter. The Evacuating sort are Emetic, Purgative, Diuretic, Sudorific, or such as raise a Salivation.

The *Alterative* kind are call'd *Digestives*, when they Fortifie the Ferment of the Stomach; *Absorbent*, when they imbibe Acids and such other Ferments; *Cordial* and *Alexipharmacal* when they exalt and Animate the Spirituous parts of the Blood, or else furnish it with Balmey Particles.

The Forms of Powders may be much diversified. When they're only Crumbled or Ground pretty round, we call 'em *Species* or *Tragaa's*. When they are put thro' a Searce, we style 'em *Powders*. When they're Ground very fine upon Porphyry, we call 'em Alcohol or fine Flowers.

'Tis worthy our Notice, that Medicines ought not to be Pulveris'd, but immediately before they're us'd; because they are more apt to lose their Vertue in Powder.

When we go about Pounding 'em, we ought to separate the harder Parts from the more pliable; to prevent the exhaling of the one while the others are a Pounding. For Volatil and easie Parts do not require so long or strong beating, as those of a stiff consistence.

Gums and Rosinous Ingredients ought always to be Pounded by themselves, because they may hinder the Pulverising of the other Parts.

Sometimes in beating Volatil Medicines, we may add Oyls to prevent their unseasonable flight.

Powders may be administered in a Wafer, or Incorporated with a few Drops of some Syrup in the form of a Bolus, or diluted with some Liquor. Sometimes they're swallow'd by themselves, but then their Dose ought not to exceed two Scruples or a Dram. If we mix 'em with Opiats, or Electuaries, we may give 'em to two Drams; and if the Patient cannot swallow all at once, let them divide the whole Dose into several Mouthfuls. If Powders are exhibited in a Liquor, they ought to be free of any harsh Taste, and may be given to three Drams, or half an Ounce, in Broth,

Broth, for Example, or any other convenient Vehicle.

The Dose of Purgative or Emetic Powders, must bear proportion to their strength. When they consist of Scammony, Coloquintida, Gum Gutta, Indian Nuts, Jalap, Gummy Turbith, or that sort of Rosinous Ingredients, we ought to qualify 'em with some opening quickening Salts, in order to prevent the inconveniencies that Rosins might occasion in sticking to the Plaits of the Guts. Their Dose generally speaking should not surpass the third part of the whole. To this purpose, the Cream and Salt of Tartar, Tartar Vitriolated, Terra Foliated, &c. are very proper. Sugar also may be added, so its Dose do's not make the Powder too bulky. Sometimes we add a few drops of some Oyl, whether Express'd or Distill'd, such as that of Anis, Fennel, Cinnamon, Cloves, &c.

Aloes and Coloquintida should be avoided as much as possible, especially when the Powder is so dispos'd as to scatter in the Mouth; in which Case such Medicines give a very disagreeable Taste.

Mercurial Powders must not be administred in Liquors, because they fall immediately to the bottom, before the Patient can swallow the Liquor.

Purgative Powders require the same Conduct with Potions of the like Force.

Digestive and Aromatical Powders consist mostly of Spices laden with Volatil Salts and Oyls, and at the same time retaining a small measure of Acidity. Such are Citron and Orange-peel, Wormwood, Cinnamon, &c. Upon the same Account we may throw in the Seeds of Anis, Fennel, Carrots, Bishops-weed, Hartwort, &c. because they're enrich'd with Aromatical Oyls, proper to fortifie the Ferments of the Stomach. We generally exhibit half a Dram, or a Dram of such Powders after Meals. They are admirably well fitted to Cachectic and Hypochondrial Diseases. They defeat fix'd Acids, and not only make 'em volatil, but qualify and smoothe 'em by vertue of their balmy Particles.

Absorbent Powders are proper to redress the Disorders of the Mass of Blood. There are three sorts of them.

them. Some are simply absorbent, such as those of Pearl, Coral, Crabs-Eyes, Diaphoretic Antimony, Seal'd Earth, &c. Others consist of these Ingredients, reinforc'd by the addition of Carminative or Aromatic Medicines. Others again are Saline Absorbents, that is, they're compounded of mix'd Salts, such as Nitre Antimonial, Tartar vitriolated, Tartarum Foliatum, Nitrum Foliatum, Salt of Wormwood, &c. But after all, Medicines compounded of the Ingredients of the first sort, and these last mention'd, in equal quantities, are the more effectual.

We may likewise add Steel to such Powders. 'Tis an Incomparable Medicine, as I'll shew anon.

Mettals and Minerals frequently must be calcin'd, otherwise they cannot be reduc'd to Powder. Calcination has the same effect upon them, that Burning has upon Plants. However the Ashes of burnt Plants may be calcin'd a fresh, by giving 'em a strong and lasting Fire.

Now in Regard of the Powders which are the Product of Calcination, we may observe several ways of Calcination. One is improperly so call'd. 'Tis perform'd by Vapors. Thus the Horns of Animals are made friable by being expos'd to the Steams of an Alembic. This Operation takes three Days to compleat the Business; but the time would be much shorten'd, if the Horns were first boyl'd five Hours in some Alkaline Liquor.

Another way of Calcination is that perform'd by Acid Liquors. If we pour Acid Corrosive Liquors upon Minerals or Mettals they cause a precipitate. Now this is almost the same thing as that which is the Product of Amalgamation; I mean, when Mettals are corroded and dissolv'd by Lays of Mercury, it being afterwards forc'd off by the Fire and separated from the remaining Calx. Cockles and Shells may be calcin'd after the same manner.

The third Method for Calcination, is that by an open Fire. Thus Stones are calcin'd to Ashes or to a Calx. Mercury by itself may be treated the same way. Few of the parts of Animals are fit to undergo this sort of

of Calcination, because their Sulphureous and Volatil Parts are apt to Exhale and Waste. And even Plants, notwithstanding their large share of fix'd Principles, are scarce sure to preserve their other valuable Parts. 'Tis Minerals and Mettals therefore that engross this preparation. Their Texture wants to be forcibly unlock'd, and indeed is admirably qualify'd for use by the Vertue of the naked Fire. Their parts are by this means refin'd and render'd fit to penetrat into the hidden Recesses of our Bodies. If a Calcin'd Mineral assumes a yellow brown Colour, 'tis call'd a *Crocus*.

A Precipitat is a Body dissolv'd and then rescu'd *Precipitats.* from the Clutches of its Dissolver; so that Precipitation is just the Reverse of Dissolution. I have furnish'd you elsewhere with several Examples relating to this affair. All Rosins dissolv'd in Spirit of Wine, become Precipitats upon the addition of common Water. Mercury added to the Solution of Gold in *Aqua Regia*, turns an *Amalgama* that falls to the bottom. All solutions in Acid Vehicles are precipitated by Alkali Salts. All solutions in Alkaline Liquors are precipitated by Acids. Thus the Oyl of Tartar precipitats Gold dissolv'd in *Aqua Regia*. And the *Sulphur Auratum* of Antimony dissolv'd in a Lixive of the Oyl of Tartar, becomes a precipitat upon the addition of distill'd Vinegar. 'Twere easy to give a thousand Instances of this Nature. We see sometimes that different Alkali's precipitat upon each other by reason of the unequal disposition of their strength. Thus Copper dissolves the Solution of Silver, as the Calaminar-stone do's that of Copper. Mercury dissolv'd in Spirit of Nitre, there being a double quantity of the Spirit to that of the Mercury, this solution I say becomes a white Precipitat upon the adding of Pickle or Spirit of Sal Armoniac; and if that be exchange'd for Urine, the precipitat is of a Rosy Colour; and if Oyl of Tartar or Lime-water supply the Room of either, then the Colour of the Precipitat is Red or yellowish.

Some Precipitats are call'd *Magisteries.* There are two sorts of 'em. One is some Stony or Metalline substance precipitated by something that is able to curb and

and impair the force of the Dissolver. The other is a Sulphureous matter precipitated, after it has been dissolv'd in an Ardent Spirit.

The Method of preparing 'em is easy. We take the Medicine, whatever 'tis, and Pulverise it. Then we throw the dissolving Menstruum upon it, and after a time, add something fit to weaken the Menstruum and promote the Precipitation. After all, we take out the Powder, wash it several times, and dry it for use.

The Menstruums that commonly dissolve Minerals are Acid Spirits. Sometimes distill'd Vinegar will serve for a Calx or an Imperfect Mineral. In other cases, there are Vehicles peculiarly appropriated to the Respective Mineral. Alkali's however possess the Vertue to precipitate them.

Vegetables may be dissolv'd in Spirit of Wine, or in a Lye of the Oyl of Tartar or of Lixivious Salts, according as their Sulphur is fine or coarse. For their Precipitation we employ common Water, or distill'd Vinegar or Allum Water, according as the Indications demand.

Salts.

Salts are the Product of Minerals, Plants and Animals. These of the Mineral Family are mostly Natural. They are extracted by the Lixive of the Earth, or of the other Minerals lodg'd within it.

Those of Plants, as I intimated before, are made thus. We burn a Plant, and with fair Water make a Lye of its Ashes; then we filtrate the Liquor, and evaporate its Moisture. If the Salt at first is not white enough, we redouble the solution, filtration and evaporation. Some burn Sulphur upon the Ashes, but their Example is not to be imitated, because it congeals and fixes the Salts, and sinks their Natural Properties. If we burn the Plants Green, we fetch more Salt out of 'em, than if they were dry.

Essential Salts are the Product of the Juices of Plants. We take the Juice, and clarify it; then we evaporate one half, and set the other in some cool Place to congeal into Crystals. These Salts properly are the Tartar of the Plants, and ought always to be administered

in

in Broth or some hot Vehicle, because they do not easily melt in a cold Vehicle.

When we set upon making of a Volatil Salt, in a dry Form, we take the fresh Plant, and beat it, then sprinkle it with it's own Juice, and put it into Digestion for some time. Afterwards we distil it thro' an Alembic in a *Balneum Mariae*; and divide the Liquor that comes over into several Portions. For the Phlegm and Spirit succeed interchangeably to each other; and according as they are variously mingled together, do both disguise the Distill'd Liquor, and perhaps carry off several different Salts and Sulphurs. Now to avoid this Confusion, when we work upon the Analysis of any Plant, in order to unfold its Principles, we keep the Liquor in five or six several Apartments, and try their Vertues with the Solution of Turnesel, Sublimat Corrosive, &c. To return: When the Distillation is finish'd, we throw the Dregs into a Retort, and fit a Receiver for it: This we distil upon a gradual Fire, and fetch from it an Urinous Spirit, a concrete volatil Salt, a stinking Oyl, and a *Caput Mortuum*: This last we calcine, and then extract its fix'd Salt with a Lixive.

The Volatil Salts that the Animal Province affords are mostly drawn with a Retort: Tho' at the same time Man's Blood, Urine, and the other Liquid parts, may be distill'd, and their Volatil Salts taken, after the same manner as those of Plants that I mention'd but now.

I take it, all Salts are the Product of the Air, or of Minerals. The Air seems to be the Original and Warehouse of Volatil Salts; witness its mighty Store of Sal Armoniac and Nitre; one of which is an admirable Combination of an Acid Salt with a Volatil Alkali; and the other a Volatil Acid joyn'd to a fix'd Alkali.

The Salts of a Mineral Descent, may be rang'd under three Heads. One sort resembles Sea-salt; a Second, Allum; and a third, Vitriol.

All the Volatil Salts of Plants or Animals resemble that Volatil Salt, which we take from Sal Armoniac. As for their Fix'd Salts, they are either simply Saltrish, and

and near ally'd to Sea-salt; witness their acid Spirit drawn over a Retort after the same manner as that of Sea-salt; or else they are Lixivious and plain Alkali's, and then they are much a-kin to the Salt we take from Nitre in fixing it.

An Essential Salt is properly a sort of common Tartar. It affords an Acid not unlike that of Allum, together with a great deal of Earth, and fix'd Alkaline Salts like those of Nitre, besides some Volatil Salts resembling those of Sal Armoniac, and a large quantity of stinking Oyl. Therefore, I take it, an Essential Salt is not a pure Salt, neither does it dissolve in cold Water, unless it be made soluble by some Lixivious Salt, after the manner of the *Vegitable Salt*.

Volatil and Lixivious Salts melt presently in the Air, especially if it be somewhat moist. The former are kept from melting by the Spirit of Wine; which is so far from dissolving 'em, that it keeps 'em dry by guarding off the Moisture of the Air.

These several Salts may be mix'd with different Substances, and so present us with great variety of Artificial Salts: Such are *Borax*, *Tartarum* and *Nitrum Foliatum*, *Sal Prunel*, &c. I shall have occasion elsewhere to enlarge upon this subject. And therefore will only add that Volatil Salts may be given in cold Vehicles; Their Dose is from ten to fifteen Grains. They are almost all of one and the same Form.

Essential Salts must be given in a Hot Liquor. Their Dose is from half a Dram to a whole one.

Lixivious Salts may be exhibited to the like Dose either in cold or hot Vehicles.

Flowers.

The way to extract Flowers is in some measure accounted for under the Head of *Sublimation*. Flowers are the more Volatil parts of any Body, which separate from the coarser, and fly up to the Neck of the sublimating Vessel. The Degrees of Fire and the means employ'd are diversify'd according to the Nature of the Medicine. Thus the Flowers of Benzoin are sublimated another way than those of Sulphur; the Flowers of Sal Armoniac are prepar'd after a different Method, from those of Antimony; and the Sublimation of Ratsbane and

and of *Sublimatum* is otherwise perform'd than that of Antimonial Cinnabar. When I come to treat the different Medicines, those respective Preparations shall be particularly taken notice of.

Extractions are the solution of some parts of Medi- *Extracts,* cines, thicken'd to the Consistence of Hony; the Menstruum being evaporated by a great Heat.

In order to form a just Idea of the Nature of solutions, we must equally be acquainted with the Nature of the thing dissolved, and of the Menstruum which dissolves it.

The Ingredients to be dissolv'd are either Mineral, Vegetable or Animal. The first are Metals, Oyls or Earths. Those of the second Rank are gummy, resinous, saline or watry. And these of the last kind, are dry or greasy, &c.

The dissolving Vehicles are common Water, Urine, distill'd Waters, Whey, Juice of Liquors, distill'd Vinegar, or Spirit of Wine. In short, some Menstruums are saline, some Lixivious, some Oily, and some Acid.

Gums and the Juices of dry'd Plants are easily dissolv'd in Water. After the dissolution we may strain 'em, and then reduce to the Consistence of an Extract upon a slow Fire.

We may likewise draw a Tincture from dry'd Herbs pulveriz'd with their own Distill'd Waters, to be put in Digestion, pour'd off by Inclination, and evaporated with a slow Fire.

All Resins, Rinds, Flowers, &c. may be reduc'd to coarse Powder, and digested with Spirit of Wine; the Tincture being afterwards pour'd off by Inclination: Such Resinous Tinctures must not be clarify'd with the whites of Eggs, lest they engage and carry off the Resinous parts. After the first Tincture is pour'd off, we may extract a new one with fresh Spirit of Wine. Then draw off the Spirit in a *Balneum Maria*, and 'twill leave a Resinous Extract.

Mucilaginous Roots afford a Juice that may also be thicken'd, or a Tincture and Extract may be taken from it with Spirit of Wine. Such are the Roots of Marshmallows, Comfrey, &c.

Sometimes Resinous Extracts will not dissolve in Wa-

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ters;

ters; and therefore we make use of the Oyl of sweet Almonds, or Yolks of Eggs, to promote their dissolution in some Potions.

If the Extract of any Rosinous Medicine be mix'd with common Water, before all the Spirit of Wine be gone; then we are presented with a Precipitat or Powder at the bottom of the Vessel, which we call a Rosinous Magistery; such is that of Jalap, &c.

Gums, and such parts of Plants as will dissolve both in common Water and *Aqua Vita*, these I say may be treated with Menstruum's compounded of *Aqua Vita* and Simple or Distill'd Waters.

The Parts of Animals afford no Tincture, but in *Aqua Vita*, or in Spirit of Wine.

Minerals sometimes will dissolve in Spirit of Wine; sometimes we must add Salt of Tartar to promote the Solution. In other Cases, we make use of common Oyl, or Oyl of Turpentine, or Acid Spirits, &c.

Common Water will dissolve some: But 'twill do it better, for being impregnated with Salts. 'Tis by this Method that Nature qualifies and employs it as a general and universal dissolver of Minerals, Plants, Animals, &c. Sugar dissolves with the greatest facility in Water, but not in Spirit of Wine. Thus Water is frequently made use of by way of Decoction, Infusion, or simple Maceration for the Extracting of the Virtues of several Medicines. And if we want to make it more keen and penetrating, we dissolve in it several salts, especially the Fix'd Salt of Tartar.

I choose to pass by the Alkaest, and universal infallible Dissolvers that some do vainly pursue. Neither do I think it worth while to mention the Spirit of the Air, that some Chymists recommend so much for Extracting of the Tincture of Coral and such other uses. They take a Glass Retort fitted to a Recipient, in the upper part of which they leave a small hole for the Circulation of the Air, and so think to draw over its Spirit.

Instead of Spirit of Wine, we may use Vinous Mead, or the Spirit of Juniper-berries, &c.

As for the Solutions of Medicines in acid Liquors, and their subsequent Precipitations, they are not properly

perly Extracts. Genuin Extracts would be made in this fashion. Take the Metal unlock'd by Art, and Digest it in Spirit of Wine. Thus ye have a Tincture, which, if ye draw off the Spirit, will yield an Extract.

Rosins are only the Precipitats of Rosinous Ingredients dissolv'd in Spirit of Wine. The Precipitation is generally accomplish'd by some common Water mixed with the Solution, which weakens and unfastens the holds of the Spirit. When the Precipitat falls to the bottom, we wash and dry it to be reserv'd for use.

Troches are Powders incorporated with some Viscerous Liquor, and reduced to the Form of little Solid round pieces. If the Powders themselves are Glutinous, simple Water will serve for Liquor; but when they're very dry, we are constrain'd to make use of some Syrup, or Gum, particularly Gum Tragacanth. After we've wrought 'em into Paste and form'd 'em, we set 'em to dry in a shade. Each piece, or every one of the Troches, may weigh about half a Dram or two Scruples, not above; and sometimes less, according to the qualities of the Medicine. Of this form we have some Purgative, some Cordial, some Narcotic, some Astringent, some Digestive, &c.

There are some Troches which are only us'd Externally; such are those of a Corrosive Character, or those design'd to be burnt for Fumigation or Smelling.

Others are only to be held in the Mouth either for the immediat Benefit of the Mouth, or to guard off the Infection of Poyson and Contagious Diseases. *Ludovic* admits only these last mention'd, and rejects the other Externals as useles. But he's mistaken, for the Troches us'd for Fumigation are very useful, and much preferable to the Powders, because the Gum ties 'em together, and so causes more smoak and less flame. And Corrosive Powders are best in the form of Troches; Their Caustic Vertue being thereby more ensur'd, and the Neighbouring Parts in less danger of damage.

In fine, 'Tis certain that the only way to preserve a great many Powders, is the reducing of 'em to Troches. Besides, Troches form'd like Lupines are swallow'd with greater ease than Powders. However, we

must take care that they be not too Stale, and that the quantity of the Gums be reasonable; otherwise their Parts will be so strictly united that the Stomach cannot dissolve 'em. And thus the Patient will be disappointed in the expected Operation.

Sometimes we may exchange the Troches to be burnt for Smell; these, I say, may be shifted for Medicinal Candles, which give a Fragrant Smell, and smooke much, when they burn.

Pills.

Pills are Medicines form'd in a round Figure, like little Balls. They may be made up of Powders and Gummy Liquors mix'd and dry'd in a Shade, and then they're near ally'd to Troches. But Pills properly so call'd, are reduc'd to a Consistence by Fire, and always retain a softness.

Aloes is the top Ingredient of Pills. Sometimes we put in Gums, such as Gum Ammoniac, Sagapenum, Opoponax, Scammony, &c. When we design Purging Pills, we put in Purging Gums; when we mean to fortifie the Stomach, the other Gums take place.

For Liquor to Incorporat Powders, we make use of Liquid or thicken'd Juices, Extracts, Syrups, Mucilages, Honey, Turpentine, or dissolv'd Gums.

The Dose of Pills (generally speaking) ought not to go beyond a Dram, lest the Patient be too much fatigu'd, especially if he cannot swallow 'em without some difficulty. The Dram may be divided into five Pills. If the Patient can swallow Pills easily, we may either enlarge the bulk or number to the quantity of a Dram and a half, or two Drams. But 'tis more inoffensive to the Stomach, to choose such Ingredients as Operat in small Doses; and so we need not scare the Person with a nauseous quantity. We commonly administer Pills wrap'd up in a Wafer or Gold leaf, to conceal their offensive Taste.

Sometimes we make Pills of Juices, or Extracts reduc'd to a strong Consistence, without any other Ingredients. But the addition of Powders facilitates the Composition.

Alterative Pills are sometimes call'd Narcotic, by reason of the Opium added; sometimes Pectoral, when the Ingredients are of that Form; and sometimes Aperient,

rient. Of the Pectorals some are only to be held in the Mouth, like Troches melted under the Tongue. The Various Forms of such Pills are accounted for in what Follows.

Electuaries are a Composition of several Medicines *Electuaries*, reduc'd to a soft Consistence, much like that of a Confection or *Opiatum*. They are made of Powders and Hony melted and skim'd; or of Sugar boyl'd to a Syrup. The Proportion of the Hony, is generally triple to that of the Powders, that is, providing there be no Pulp nor any other soft Ingredient.

We mix the Powders with the Hony or other Liquors, while they're hot and boyling: Stirring 'em to make the Powders incorporat the better. Then if we think to augment their Vertue by a Fermentation, we may leave 'em in some hot Place.

If the Powders are very dry, they'll need more Syrup or Honey, because they suck up a great deal of Moisture. Or we may dilute the Syrup or Honey with some convenient Decoction.

Purgative Electuaries are simply call'd *Electuaries*; *Confections* but those of a fortifying Force are call'd *Confections*; and those of a Narcotic Vertue are Christen'd *Opiats*; *Opiats*. tho' at the same time all Extemporary Prescriptions that come to the Consistence of a soft Electuary, are dignified with the same Name.

If the Decoctions us'd for Incorporating of Powders, and dissolving of Pulps, be of themselves Purgative, then the Dose of the Purgative Powders must fall in proportion.

The common Dose of a Purging Electuary is from a Dram to Six Drams. I take it, they should be made pretty strong, that so their Dose might be lessen'd; for a large quantity, whether by way of Potion or Opiat, must needs be very nauseous.

The Dose of a Confection generally comes between One and Three Drams. We must consider that Alteratives do not operate forcibly, and therefore their Dose should be somewhat large. Some are so precise, they will not prescribe above a Dram of the Confection of Hyacinth or Alkermes; whereas should they

bethink themselves, that in such a quantity there is not above Fifteen Grains of the Cordial Powders, and that all the rest is Syrup, they could not but see their Error.

As for Opiats, Opium is their Basis, and regulates their Doses.

Bolus's.

A Bolus is a Form of Medicines that is not ready made in the Shops; but prescrib'd by a Physician, as occasion offers. 'Tis more solid than Confections or soft Electuaries, but not so much as Pills. It may be made up of Powders mix'd with Syrups, .Electuaries, Conserves, Pulps, &c.

Some *Bolus's* are Purging, some Fortifying, some Narcotic, &c.

Their Dose ought not to exceed Six Drams, unless the Pulp of which they're compounded be very agreeable. Otherwise a large quantity will be difficultly swallowed. We must take care that none of the Ingredients be disagreeable either in Taste or Smell. If they be too soft, we may work 'em to a due Consistence with Powder of Liquorice or Sugar. Besides, the Powder will prevent their sticking to the Paper they're wrapp'd in.

Alterative Bolus's are generally made less than the Purgative, because of their frequent Repetition.

This Form is chiefly made use of, when we have to do with a Medicine that cannot be administred in a Liquor: Such is sweet Mercury.

'Tis true, the same Design might be answer'd by Pills; but oft-times the Stomach is disoblig'd by their Hardness, and is not in a Capacity to dissolve 'em. Besides, the boyling of some Medicines to the Consistence of Pills, carries off their Volatil Parts, which are preserv'd in Bolus's; witness those of Turpentine.

Conserves.

Conserves are Medicines mix'd with Sugar in a pretty solid Consistence. When we make the Conserve of dry Flowers and Herbs, we are oblig'd to add their Decoctions or Distill'd Waters to melt the Sugar; its quantity being generally the Triple of the Flowers,

After.

Afterwards we evaporate the whole to a due Consistence upon a slow Fire.

The Flowers and Herbs are first bruis'd in a Stone Mortar; before we begin the Work; Roots must first be boyl'd, and put thro' a Sieve like the Pulp of Fruits; and some Rinds, particularly those of Oranges and Citrons, may be treated the same way. In these Cases the quantity of the Sugar is only the double of that of the Medicine. I reckon 'tis needless to tell what Conserves are made for, *viz.* For the preserving of the Vertues of Medicines; which indeed are oftentimes stified by an over-bearing quantity of Sugar.

Confits or Preserves are Medicines or Victuals *Confits.* boyl'd entire in Sugar, and so preserv'd. Some are reduc'd to a Liquid Form, and reserv'd like Syrups: Others are call'd dry Confits. If the Ingredients are very dry, they must be cut into long or round Slices, that the Sugar or Liquor may penetrate into 'em. But we must see that they be not over-boyl'd, else the Medicine may be robb'd of its Vertue.

Roots should be well cleans'd, and sometimes their Strings must be cut off, when we design to preserve them. Then they're boyl'd in Water, and afterwards dry'd. If we preserve unripe Nuts, we peel off their outermost Skin; then steep 'em in Water, to take off their Vitriolick Sharpness, and afterwards boyl 'em, and then season 'em with Spices or Citron Peel.

All these different parts of Plants are preserv'd in their own Decoction and an equal quantity of Sugar. The Moisture being evaporated to the Consistence of a Syrup. Flowers preserv'd do not need long boiling.

We may likewise preserve some Fruits and Flowers in Salt and Vinegar, &c.

Lozenges are made thus: We dissolve Sugar in some Liquor, and boyl it to such a degree, that 'tis perfectly solid when it grows cold; as it appears by throwing a few drops upon a Stone. Then we add the Powders or dry Confits bruis'd; and at last we throw in a few drops of some Distill'd Oyl, and rub the Marble Stone with it, upon which we pour out

the Sugar thus melted and mix'd with the Powders. The common proportion of the Sugar is four times as much as that of the Powders. If the Powders are purgative, their Dose must be heedfully minded. When the whole is cold, we cut it into Lozenges, three Drams, or half an Ounce a-piece, according as their Dose is determin'd. Some of 'em are Fortifying, some Pectoral, some Purgative, according to the Nature of the Ingredients.

If *Lozenges* be cut out in a round Form, we call 'em *Rotula*, or *Orbiculi*.

Robs.

Some thicken'd Juices are call'd *Rob's* or *Sapa's*. They're made thus: We take Juicy Plants, or rather Fruits, and beat 'em, then we squeeze out the Juice, and either filtrate or pour it off by *Inclination*, after it has stood some time. At last we set it to evaporate upon a slow Fire, stirring it continually to prevent any Offensive Smell.

Dry Plants afford no Juice. 'Tis true, with the help of Water or some other Liquor we might draw some, but then 'tis rather an Extract than a Rob or thicken'd Juice. Neither Almonds nor any other Fruits that afford Oyls by Expression, will furnish Juices proper to be thicken'd. Boyl'd Wine is what properly we call *Sapa*; and the other Juices thicken'd and mix'd either with Spices or Sugar, are call'd *Rob's*. Such are the Rob of Mulberries, Rob of Quinces, Rob of Elder-berries, &c. When we extract a Juice from dry'd Fruits by boyling 'em, it tastes of it self sweet, and is call'd *Hony*. Such are the Hony of Juniper berries, and the Hony of dry'd Raisins. *Robs* are rarely administred by themselves. However we may exhibit half an Ounce or an Ounce, providing the Juices are not extraordinary Violent. Such is the Dose of those above mention'd.

We preserve but few Liquid Juices, excepting such as are Acid, or have undergone Fermentation: Because all others corrupt and lose their Vertue by fermenting.

Royal Paffe.

Royal Paffe is made of Almonds and Pistache-nuts beaten, of the four cold Seeds pick'd, aromatic Powders, and sometimes the flesh of Animals. The whole mixture is well bruised, and joyn'd to a double quantity of Sugar

Sugar dissolv'd, and so reduc'd to PASTE, which may be given in any Liquor, or in a Solid Form when it becomes dry,

In this Form we generally make use of Oily and nourishing Ingredients, in order to temper and qualify the keenness of the Humors in Hætic Feavers and in the disorders of the Breast. For Example: Suppose we take two Ounces of Almonds or of any other Fruit, one Ounce of Seeds, two Drams of Powders (providing there be no more than a Grain of Musk or Amber) three Ounces of the boyl'd flesh of Crabs or Tortoises, or of any other Animal; three quarters of a Pound of Sugar: And mix all. Then pound the whole and moisten it till it become PASTE. Or else make an Emulsion with some pectoral Water, the Fruits and Seeds being first beaten before the Sugar Flesh and Powders be added.

Gellies are made of the Juices of Fruits drawn by expression, clarify'd with the yolks of Eggs, and thickend gradually upon a slow Fire, a convenient quantity of sugar being first added. Or we may extract the Juice by boyling, and then either filtrate or decant the Decoction, and thicken it with Sugar; and at last put the Gelly into some cool Place, where it may quickly congeal.

Sometimes we make Gellies of Bones and Horns; but then they must be very well boyl'd. In the first Place having reduc'd 'em to small pieces, we add to the Liquor equal quantities of White-wine and the Juice of Limons or some other Acid, to promote the Dissolution; and after a sufficient boyling they become friable. Toward the end we add a little of the Tincture of Cinnamon, or some other Spice, and then strain the hot Liquor, and set it in some cool Place to congeal.

Glass is made, by putting a strong melting Fire to the Calx or Ashes of Metals or Minerals. Oftentimes we add Borace or other Powders to help them to melt. Then we pour all out upon a warm marble Stone; and may give several different Colours to the Glass, as we please; witness the Various Glasses of Antimony.

Regulus.

A *Regulus* may be made of Ratsbane, Antimony and other Minerals, by separating the true Metallin part from the Dross, for which end we mix the Mineral with Tartar, Nitre, or other Salts, and melt it; then we pour the melted Substance into a Mould of hot Iron.

I purposely wave the *Facula's*, as being of no use.

C H A P. XIV.

*Of the External dry Forms.**Solid External Forms.*

Medicines of a Solid Consistence for outward application have the Forms of Powders, Precipitates, &c. Now since these are already accounted for in the foregoing Chapter, I shall therefore confine my present Discourse to the following Forms that have not yet been touch'd upon. They are these: Cantheries, Cataplasms, Ointments, Plaisters, Cerecloths, Suppositories, Pessaries, Soaps, chewing Medicines, and Sneezing Medicines.

Cauteries.

Cauteries are various. Besides Ratsbane and the Corrosive Sublimatum, we have several others; some of an Alkaline, some of an Acid Substance.

Those which contain Alkali Salts are Quick-lime, or Lixives made of Ashes and gently evaporated; which quickly melt in the Air, or at least lose their Caustic Vertue. Upon which account we are oblig'd to shut 'em up where moist or cold Air cannot reach, I mean, in some Vessel well stop'd, and kept in a warm Place.

Acid Cauteries are the Butter of Antimony, or Troches form'd of it together with Gum Tragacanth; the Infernal Stone, Red Precipitat, Sublimatum, &c. This sort do's not easily penetrat unless the Skin be broke before. The manner how these and all other Caustics display their burning force is describ'd afterwards.

Cata-

Cataplasmis are Medicines reduc'd to the Consistence *Cataplasmis.* of Pap; being boyl'd along with Liquors, or mix'd with 'em without Fire.

Sometimes we beat Fruits and fresh Herbs, and make Cataplasmis of their Juices mix'd with other Ingredients. In other cases we boyl the Herbs and Roots till they become very soft, and then put their Pulps thro' a Searce. If the Roots be dry, they should be pulveriz'd before they be boyl'd. If they're fresh, a small beating will serve.

Sometimes we only make use of simple Decoctions, bringing 'em to the Consistence of Pap by the addition of Meal.

Sometimes we add Oyls, Fat, Crumb of Bread, Mineral Earths, and Gums. Sometimes Wine, Vinegar, Hony, Mucilages, &c.

Oftentimes we meet with Cataplasmis made of the Pulp of Figs and Yest dissolv'd in Vinegar and mix'd with Powders. If we desire that they should raise Blisters, we add Cantharides, and then apply 'em cold to the part. But in other cases we apply 'em hot to render 'em more active, especially when we design to Discuss, Ripen, Digest, Soften, &c.

Suppose we have a Pound of Pulp about as thick as Pap, we add to it three or four Ounces of Powders, and a Pound of Oyls; or if Mucilages be made use of the proportion will be still the same; namely, that three Ounces of Powders will generally suffice for twelve Ounces of Mucilage.

The Quantity of the whole prescrib'd at one time is enlarg'd or diminish'd, in preporition to the comparative largeness of the part affected, and frequency of Application. Some must be renew'd very often. Others only twice a Day. Besides we must have regard to the durable freshness of the Cataplasmin; for some will corrupt and become sowre in a Day or two, others will keep good for several Months.

Sometimes we add to 'em the Dung of Animals, particularly that of Dogs call'd *Album Gratum*.

If we add the Juice of Onyons, we had best mix it with the Pulp, and not Boyl it, else its Volatil Salt will exhale.

In some Cases Oyls may be left out, especially when discussing is propos'd. And then indeed 'twill not be improper to apply some discussing Fomentation before the Cataplasim.

Some Cataplasims are very simple, as for Instance, that of the Pulp of Codlins, for the Eyes.

Under the Head of Cataplasims we may comprise Toasts soak'd in Wine or Brandy, or impregnated with Spices, and applied to the Stomach and other parts.

There are Cataplasims which are very serviceable in Internal Diseases. There are some that Fortifie the Bowels, disperse Humours, kill Worms, Purge, procure Sweat, provoke Urine, &c. We shall have occasion afterwards to furnish you with Examples.

Ointments.

An Ointment is a Medicine of the Consistence of Honey, made of Oyls, Wax, Powders, Fat, Gums, &c. Their common Proportion is thus; to an Ounce of Oyl give two Drams of Wax, and one Dram of Powder, and melt all upon the Fire. Sometimes we make 'em without Fire, of Oyls, Liquors, and cementing Powders, especially those of Metals or Minerals Pounded with a Leaden Pestle: The whole Mass must be exactly mix'd, and stirr'd about a long while.

Some Ointments are made without Fire, of Powders Incorporated with Tallow, or fresh Butter.

Others made by Decoction consist of equal quantities of Juices and Oyls boyl'd together, and mix'd with a little Wax and some Powder.

If we add Gums, the quantity of the Wax and Powders must fall in Proportion. Mineral Powders are the heaviest and least absorbent, and upon that account claim the Priviledge of a larger quantity. Accordingly to an Ounce of Oyl, we may give three Drams of such Powders, when we prescribe for the cleansing of Ulcers.

Some.

Sometimes instead of Oyl we prescribe Mucilages, Honey, Butter, Fat, and especially Turpentine, which is an incomparable Ingredient in all Ointments applied to Ulcers.

When we Boyl Ointments, we must take care that the Powders be well united with the Oyls, otherwise they'll be burnt and sing'd at the bottom of the Vessel.

Therefore we had best mix every thing in its proper Season, and see it match'd with its respective Companion. As for Example, Joyn the Gums and Turpentine with the Fat and Oyls; then put in the Juices of Plants which we leave to a gentle Evaporation, and lastly the Powders Pounded very fine.

The Consistence of Cerecloths is firmer than Ointments, and softer than Plaisters. To an Ounce of Oyl we generally put three Drams or half an Ounce of Wax, and a Dram and a half of Powders. Gums and Rosins (as I intimated before) supply the room of Wax; as Fat and Butter do that of Oyls. Sometimes we may take some officinal Plaister instead of Wax, especially if we desire a pretty thick Consistence. Cerecloths are invented to supply the room of Plaisters in some cases, where either the excessive pain, or the various bendings of the Part could not admit of hard unpliant Plaisters.

An Emplaster is more Solid than Ointments, or Cerecloths. 'Tis generally spread upon Linnen, Taffety, or Leather, and answers the same Indications as Ointments or Cerecloths, being compounded of the same Ingredients. But the Powders and Wax bear a larger proportion to the Oyls, and render it more viscous and coherent to the skin, and less apt to spread.

Their Solidity is enlarg'd or diminish'd according as the Seasons of the Year and the Nature of the affected part will require. Thus a Plaister applied to a very hot Part, ought to be more Solid, lest the Heat of the Part should melt its Oyls, &c. Upon the same account, Plaisters made in Summer ought to be thicker and more consistent than those in Winter.

For

For a thin Plaister we generally take an Ounce of Oyl, half an Ounce of Powders, and six or eight Drams of Wax. Whereas for a thick strong Plaister six Drams of Powders and one Ounce and a half of Wax will answer the Ounce of Oyl.

In the mean while, we must still remember (as I intimated before) that Gums, Rosins, Pitch, &c. are look'd upon as Wax: and Butter, Fat, Turpentine, &c. stands in the room of Oyl.

The Juices of Plants make little alteration among the proportions of the Ingredients, especially those of the Powders, because their moisture is always Evaporated, and what remains is, properly speaking, an *Extract*.

The Figures of Plaisters are answerable to that of the Part they're applied to. Those for the Stomach are cut out like a Shield; those for the Head, in the Form of a T. Those for the Reins, are Square. Those for the Womb, Round. 'Tis true such niceties are somewhat frivolous, and perhaps groundless; but since custom has countenanc'd 'em, 'tis a Young Physician's business to be acquainted with 'em.

Plaisters have much the same Vertues as Ointments or Cerecloths; with the advantage of sticking closer to the Parts. They are employ'd to discuss, soften, beat back the Humours, &c. And here by the way 'twill not be improper to tell ye, that when any Internal disorder is seated in the Abdomen, and requires the application of Plaisters, we should not apply 'em immediately upon the Part affected, but to the Navel where the way is open to receive the Vertue of the Medicine; for there is no possible Passage for it across the Muscles.

Suppositories.

Suppositories are small Solid Medicines thrust up into the Fundament to procure a Stool. They are generally three or four Fingers long, or less for Children. For a common Costiveness we may apply in this fashion a piece of White Soap, or the Root or Stalk of Marshmallows, Coleworts, Beets, &c.

The

The Compounded sort are made of Honey boyl'd till it become hard, that is, till it do's not stick to ones Fingers, and then mix'd with Powders or Salts. For Example, Take four Scruples of Powders, or Purgative Salts, and with an Ounce of Honey prepar'd as above, make a Suppository.

However, such sharp Medicines are not to be frequently us'd, lest they occasion a Pain or Inflammation in the Fundament. Other Suppositories of a milder Character for a Tenesmus, the Piles, the Ascariides, Worms, &c. these, I say are not so provoking.

In General, Alterative Suppositories may safely be repeated, excepting the Narcotic sort. These indeed may benum and unbend the Parts so as to make 'em Paralytic, and therefore ought to be seldom us'd. All Suppositories are usually rub'd over with Oyl before we make use of 'em, by reason that it facilitates their entrance extreamly. If we add the Juices of Plants to Suppositories, their superfluous moisture must be Evaporated.

We must always take care that their bottom be much larger than the top. Sometimes we tye threads to 'em, if we fear their running too far into the Gut. For the most part we prescribe two Suppositories, that if one should happen to slip out without Operation, the other may supply its room.

Pessaries are Medicines thrust up into the Vagi-*Pessaries.* na, or Neck of the Womb. There are two sorts of them.

The one has the form and Consistence of Suppositories; only they are a little longer and bigger. The length of a fore Finger, and the bigness of ones Thumb is their common Gauge. Their Ingredients ought to be such as are dedicated to the Womb. If we mean to Cleanse and bring out noxious Humours, then the Juices of Hysterical Plants, Gall, Myrrh, Gum Ammoniac, &c. mix'd up with Honey, are proper. If we design to fortifie or consolidate the Womb, or to mitigate Pain, then we lay aside such provoking Ingredients

redients, and choose those which are Sweet-scented, Opium, Vulneraries, &c.

The Second sort are improperly call'd Pessaries, as being only Oyls, Ointments, or Liquors, applied to the *Vagina* with a Linnen Cloth, or Cotton, or a Sponge. Sometimes Powders are applied alone upon Cotton. This sort answers the same Indications as the former.

There is a Third sort of Pessaries behind, which we may call Retentive: They are us'd for the falling down of the Womb: Some are made in the Form of an Egg, but they are heavy to a troublesom degree, and are apt to slip out, especially during the Flux of their Terms. Others are made up with a piece of Cork cover'd with Wax in the Form of a round Circle, with a large Hole in the middle. And these are more convenient. Or, if their roundness occasion their falling out, we may make 'em square and cut down the Angles. Supposing still that they have a hole in the middle, and are large enough to keep their hold.

'Tis needless to tell ye that the Cork has the Advantage of Lightness, the Wax unites the Parts and prevents their Corruption, and the Hole in the middle is a Conveniency for the Flux of the Terms.

Bags.

Among the Solid Remedies applied outwardly, those call'd *Bags* ought not to be forgot. They are a Composition of Plants, either simply bruis'd, or boyl'd in some Liquor, and sow'd up in Bags to be applied to the Parts. The proportional Largeness of the Parts will determine the quantity of the Ingredients, and the Size of the Bag.

Soap.

Soap is made of the Oyl of Olives, Lime-water, a Lixive of Ashes, and Starch. This last is an improper Ingredient in Medicinal Soap, and therefore that of Alicante seems to be best, as being least incumbered with Foreign Particles, and most proper either for inward Use, or external Application; or for making of Sweet-scented Balls.

Candles.

The Medicines called *Candles*, are Wax prepar'd and mix'd with other Ingridients, to the Consistence of

a Plaister. Sometimes 'tis cover'd with Corrosive Powders, and form'd just like a small Wax-Candle to be thrust into the Yard for consuming of the Caruncles. Some choose to put the Corrosive only on the top or one end of it, that so it may only reach such places as stand out and straiten it. Before the Introduction, it may be anointed with Oyl.

Masticatoria, or chewing Medicines, are sometimes *Chewing* of a thick Consistence; and sometimes they're only *Medicines*. Powders ty'd up in a Bag. Some of 'em are very simple and common. Such are Pellitory and Tobacco, which we commonly chew in the Mouth, in order to fill it with sharp Salt, and evacuate Phlegm.

Some are only design'd for the quenching of Thirst. Thus a Ball of Crystal or Wax roll'd in the Mouth will mitigate that Symptom.

Sneezing Medicines are the Powders of Cephalic *Sneezing* and sharp Plants, to be snuff'd up the Nose. Their *Medicines*, Forms of Prescription shall be exemplified in the following Parts of this Treatise.

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TREATISE

O F

MEDICINES.

PART II.

CHAP. I.

Of Vomits.

IN the former part of this Treatise I dispatch'd the Choice, Preparations and Compositions of Medicines. It remains now to Illustrate our Doctrine with proper Examples. In order to answer this end, 'twill be requisite, in the first place, to examine all the several sorts of Evacuating Medicines, namely, Vomits, Purges, Diaphoreticks, Diureticks, Fluxing Medicines, &c.

As for Vomits, I purpose to cast their Explication into the following Heads. 1. To explain what Vomiting is? 2. In what manner Emeticks display their Force? 3. In which Diseases they are proper? 4. What

Precaution and Conduct is needful before, or during the time of their Operation. 5. To cut out the Distinctions between the safer and more dangerous sort. And, 6. To describe Remedies capable to keep 'em under, when they attempt over-violent Operations. This Method shall be likewise Observ'd in discoursing of the other Evacuating Medicines.

What is Vomiting.

Vomiting, to speak properly, is only a Contraction of the Fibres of the Stomach, squeezing forth its Contents by the Gullet. This Contraction always happens, when the Spirits range in the fleshy Fibres of the Stomach more nimbly, and with greater impetuosity, than they are wont to do. 'Tis then, that the *Pylorus* is not large enough to empty all that's thrown upon it, so that some part must needs recoil towards the Mouth. Nay sometimes 'tis quite shut, being encompass'd with a numberless train of Circular Fibres, which in this case we suppose to be contracted.

Some would fetch the cause of Vomiting from the compression of the Middriff and the Muscles of the Abdomen. But their Plea is unreasonable. The very Structure of the Middriff may convince us that it cannot fall down flat upon the Stomach in order to squeeze it, without stopping and hemming in the Humors that the Stomach would endeavor to throw out. Besides, Experience will vouch that in a Hiccup the Muscles of the Abdomen and Middriff are violently contracted, and yet we cannot tack vomiting to it.

The Spirits choose the Passages where they meet with the least resistance.

To return to our own Hypothesis. Let us suppose that violent commotions or disorders in the Head occasion Vomiting. Doubtless the Spirits are impetuously darted into the fleshy Fibres of the Stomach by reason that some other Nerves or Passages are stop'd. When the other Ports are deserted a greater share must be allotted to the Stomach. Now this same effect will insue upon any disagreeable imagination occasion'd by Objects of Aversion; especially in Persons whose Spirits are brisk and tender, such as Children and Women, because the Fibres of their Brains are more pliable.

Some-

Sometimes indeed the Subtile Spirits may repair in Crouds to the fleshy Fibres of the Stomac, without the Influence of any cause in the Brain. Any sharp Medicine twitching and unripping the Texture of the Fibres, will sollicit them to sally out. For since they frequent all the parts of the Body, they'll naturally move with the greatest rapidity where their range is widest and least controul'd. Now such Medicines weaken and unbend the Membrans of the Stomac, and so give the Spirits the opportunity of that rapid Carreer.

But there are other Medicines that cause Vomiting, *Why Oyls and yet do not influence the Spirits so as to procure their crouding into the Fibres of the Stomac. They only retain and emprison the Spirits, which would be otherwise waisted by the pores of the Fibres. Such are Oyls, which besmear the inner Cavity of the Stomac, and so prevent the escape of the inclosed Spirits. Now at the same time fresh Recruits must naturally arrive. And for so much as the Former detachments are not dislodg'd; both of 'em together will overpour the Fibres, and contract 'em. Whereupon the Humors in the Stomac are squee'd forth at the Mouth.*

Now, that Oily Medicines occasion Vomiting by preventing the waste of the Volatil parts, will be further made out by the following Remarks. First, all the parts of our Body must needs be allow'd a Transpiration both inwardly and outwardly. Secondly, that which exhales by transpiration is extreemly agitated; above all, that which soaks thro' the inner Coats of the Stomac, which is likewise very sharp, as being tinctur'd with the Ferments that this part abounds with. Thirdly, this sharp Volatil matter, if it remain in the Fibres of the Stomac, must needs occasion Convulsive motions, and consequently a Vomiting.

Thus we see sharp or Oily Medicines will occasion Vomiting. But these are not the only Vomits. Sometimes a Draught of warm Water proves Emetic. Now 'tis certain hot Water is neither sharp nor Oily. But its heat may enable it to dissolve and stir up the Salts that oftentimes nestle in the bottom of the Stomac, And perhaps it may rarify the Spirits contain'd in the

Fibres of the Stomach, upon which the Fibres may be contracted and shorten'd.

In fine, Vomiting is either occasion'd by sharp or bitter Humours, or indigested Viſuals Tinctur'd with theſe qualities, or elſe by the force of Medicines, ſuch as I mention'd but now.

Why ſome
Persons Vo-
mit more
easily than
others.

And by the way 'twill not be improper to obſerve, that ſome Perſons Vomit much more eaſily than others; either becauſe their Fibres are more delicat, or becauſe the Cruſt which ſhould defend 'em is remov'd. Thus after much Vomiting, we find that what by ſhaking of the Stomach, and the influence of ſharp Medicines, this Cruſt is taken off, and the Vomiting continues, tho' no ſharp thing moleſt the Stomach. In this caſe, the moſt wholeſome Food and every thing that enters the Stomach proves Emetic; and a perfect Cure cannot be accompliſh'd till the Spirits be pacify'd, and the Fibres guarded with a new Cruſt.

Vomits were
formerly
much us'd.

In Ancient times Phyſicians frequently preſcribed Vomits, and with good Succeſs. In all ſtubborn Diſeaſes Vomiting was their ſureſt Relief. But now a days many Phyſicians are ſo minded, they will never uſe 'em till the laſt extremity, or till the ſtrength of the Patient be quite gone.

Seſſ. 2.
Aph. 29.

By this means Vomits are brought under Diſrepute. Thoſe who deery 'em, pretend that Hippocrates and Galen never preſcribed harſh Remedies, but for harſh Diſtempers, nor deſperate Cures but in caſes of Exremity. But if we Conſult Hippocrates, they'll find he ſays expreſly that in moſt Diſeaſes, if Evacuation be proper, it muſt be fallen upon be- times. Beſides, there are ſome Vomits that are very gentle, and there are many Diſeaſes, where the Sick Perſon is extream bad in the very beginning, notwithstanding that the ſtrength is not yet quite exhausted, nor Nature altogether Fatigu'd.

In ſhort, I hope they cannot deny that all the Ancient Phyſicians did frequently and ſucceſsfully preſcribe Vomits, in the very beginning of Diſeaſes. If they answer, that the Climats where Hippocrates and

Galen

Galen Practis'd were infinitely hotter than ours, and therefore their Bodies being more Bilious might agree better with Vomits. To this I Reply, That *Germany* and *Switzerland* are cold Countries, and yet there Vomits are both common and very successful. And in *France* Experience will teach, that in cold Pituitous Diseases, Emetics are the only Sovereign Remedies.

I grant that the Temperament and Habit of the Body, the Season, the Climate, the Nature and Period of the Distemper, ought to be carefully weigh'd before we administer 'em. But I cannot abstain from condoling the insufferable Ignorance of some Physicians, that will never give Vomits till they find the Pulse Convulsive and low; and withal the miserable Circumstances of such Patients as lye under their hands.

Vomits first throw out whatever is contain'd in the Stomach. Then the Convulsions of the Stomach and Middriff shake the Liver, Sweetbread, Guts, and other adjacent parts; and consequently squeeze out a great deal of Choller, and Pancreatical Juice, one part of which is Vomited up, and another thrown into the Guts. Lastly, the ends of the Nerves and Arteries inserted into the Stomach are grated and gall'd, so that they throw out some part of what they contain. 'Tis possible that by Vertue of all these different Motions a part of the Vomit may either enter the Veins of the Stomach, or the Milky Vessels in the Guts, and so joyn the Blood, and melt it down, and dispose it to throw out larger quantities of Humours upon the Stomach and the other provoked Parts.

Vomits are particularly useful, when the Stomach is overcharg'd with indigested Food, or Cholerick or Pituitous Humours. The Symptoms that discover this disorder of the Stomach, are a loathing, Inclination to Vomit, a bitterness in the Mouth, deprav'd and extravagant Tastes, flushings in the Face, Head-aches, and sometimes a *Lienteria*, and a perceivable fulness of the Belly when 'tis touch'd, especially if it be with-

The Operation of Vomits.

Indications for Vomiting

out pain and distention. For the painlessness shews that it do's not spring from any Inflammation of the Internal parts; and the absence of Distention clears it from the Imputation of Wind. And therefore a Painless and undistended fulness, free from any signs of a Dropsy, such as a floating Motion, or the Prominence of the Navel; I say a fulness of the Abdomen thus Circumstantiat takes rise from the Press of Humors in the Guts: And is more effectually brought down by six or seven Grains of Emetic Tartar, than by all the *Posse* of Cordial Medicines that Art can Invent.

The Diseases that admit Vomits. Vomits are likewise proper when the Stomac is tainted with any strange Ferment, so that the Person cannot take down any thing, but 'tis presently cast up.

They are also administred with success in Intermittent Fevers, in the Infancy of Malignant Fevers, in Asthmals, in the Gout, and in fine in all Diseases arising from the impurities of the Stomac and first Passages.

The Summer a more proper Season than Winter. The Distempers that require Vomits are more frequent in Summer than in Winter, by Reason that Digestion then is more imperfect. The Sulphur of the Body is then aloft, and cramps the Ferment of the Stomach; and the Spirits which should put it into Motion are much exhausted. Besides, at that time of the Year, Costiveness prevails, and consequently the Stomac is more crouded with Humors. Now all these Reasons are sufficient Proof to Justifie the choice of Emetics in Summer, and Purgatives in Winter,

Indications against Vomits. Vomits are improper for Full, Melancholy or Phthical Constitutions.

The first are crouded with Blood; and 'tis to be fear'd that the Throws of the Vomit may occasion the bursting of some of the Blood-Vessels.

As for the second, namely, melancholy Constitutions, their Humors for the most part nestle in the Bowels; besides they are not easily wrought upon to Vomit, they are Subject to a difficulty of Breathing, and lastly their Blood being tainted with sharp provoking Particles,

cles, we ought to be cautious of awakening Convulsive Contractions. Upon these Accounts we conclude Vomiting Improper.

In the third and last place, Phthisical Persons ought not not to vomit, unless it be very rarely, or when pressing Indications urge us to it. They who have long Necks and narrow Breasts are always deem'd as Phthisical, or apt to become such. The Reasons which give the Cause against Vomits are these. First, The Contractions of the Stomach and Midriff, occasion'd by the Vomit, are apt to jolt and disorder the Lungs that in this case are ulcerated. Secondly, the same Reasons brought in for melancholic Persons, are likewise conclusive in a Phthisic.

However, a general Rule may admit of Exception. *An Exception.* For the callous and winding Ulcers of the Lungs, or such as contain large quantities of Purulent Matter; these, I say, are much benefitted by Vomits. The Throws of the Vomit carry off a great deal of the sharp and Purulent Matter, and procure a considerable reprieve from the most troublesome Symptoms, The Cough is thereby abated, the Spittings lessen'd, and sometimes the Person is so surpriz'd with the relentment or disappearance of the Symptoms, that he Fancies himself wholly cur'd.

Big-belly'd Women and Persons troubled with Ruptures ought not to Vomit; unless it be to promote Delivery, or to recall the Spirits in Sleepy Diseases. 'Tis true some famous Physicians have justly Remark'd that sometimes Vomits have been very serviceable in the Cure of Ruptures. When the Force of Cataplasms cannot reinstate the Gut in its proper Place, sometimes the Contractions of a Vomit will fetch it in. And therefore, when I say in general, that Vomits are improper in the case of Ruptures; I exclude such particular cases where skilful Physicians may find 'em useful.

Persons that have long Necks and narrow Breasts are forbid Vomits, not only because of their Propensity to a Phthisick, but because Vomits go very hard with

with 'em. They are apt to cause in them a difficulty of Breathing: Besides, the Matter vomited up has a long way to pass before it comes at the Mouth.

People subject to weak Eyes ought not to take Vomits. They occasion an offensive Acrimony in the Blood, and throw it up to the Head: Now the Eyes lying that way, come to be inflam'd by the sudden Arrival of more Blood than ordinary; or the Branches of the Carotid Arteries being distended, may press down the Optic Nerves, and cause a direct Blindness. 'Tis upon these Accounts likewise, what we sometimes see, that Vomits are useful in some Diseases of the Eyes; witness a *Gutta Serena*, &c.

Circumstances encouraging to vomit.

Emetics succeed well with such as digest well, and have sound Bowels; whose Breast is large, and the Neck short; especially when the Symptoms prevail that call for vomiting, and those that forbid it are not observ'd; providing still that Nature be not endeavouring Critical Evacuations, for in such cases they are highly Pernicious.

The Preparation of the Body.

Before we exhibit Vomits, we must take care the thick slimy Humors be attenuated and melted down; by sharp or cutting and moistening Medicines. To this Purpose we administer Broths or Ptisans impregnated with cooling and aperitive Herbs, or fix'd Salts fit to imbibe the congealing Acid. When the Vomit is taken down, we ought to have some fat Broth in readiness, that the Person may take of it now and then. It washes off the Parts of the Emetic, and the sharp Humors that may stick to the Fibres of the Stomac; and likewise besmeares and covers the Fibres from the grating of Saline Particles.

What is to be given after vomiting is over.

When the vomiting is over, we administer such Remedies as retrieve the Natural Condition of the Stomac, and rarify the Spirits and Humors. Of these more anon.

A List of Emeticks.

In the lowest Form of Vomits we usually Reckon hot Water, Barley Water, Oyl, Water mix'd with Honey, &c. Those of a middling size are, Oxyssel of Squills; the Seeds of Rapes, Dill, and white Orach; The

The Roots of Raddishes, Asarabacca and *Ipecacuanha*; the *Gilla* of Vitriol; Salt of Vitriol, &c. Those of the highest Pitch are, the Roots of wild Cucumbers, Hellebor, and Coloquintida; the Leaves of Pine Spurge, Spurge Lawrel, and the Preparations of Antimony. Several of these Vomits are now in Disuse, because their Operation is very uncertain, and they oftentimes fall short of their end. Wild Cucumbers and Coloquintida are seldom us'd; they are too sharp; and besides they frequently Operat more by Stool than Vomiting. White Hellebor, Spurge Lawrel, and Pine Spurge are yet less in use. In a Word, the greatest part of Emetic Plants are so tainted with sharp Corrosive Salts, that they ought not to be given unless it be in very small Doses, and after they're steep'd in Vinegar; for the Acid of the Vinegar tempers and brings under the Corrosive sharpness. Besides, 'twill be requisite to exhibit 'em in fat Broth, to abate their Violence. Thus if we have to do with a Robust Person whose Circumstances require a violent Emetic, then we may exhibit ten or twelve Grains of the Powder of the Root of Pine Spurge, or of the Leaves of Spurge Olive; or the Kernel of a Barbado-nut. But these Medicines require a great deal of Caution and Prudence, and therefore are to be avoided as much as possible. 'Tis only by Vertue of their piercing Caustic parts that they cause Vomiting, and consequently they cannot but produce a great deal of Pain and a prodigious sharpness in the Stomac.

Hot Water causes vomiting, either by unbending *Hot Water.* the Fibres of the Stomac, or putting the Lazy Salts into motion. 'Tis only proper for such as have a great list to Vomit.

Oyl is improper for them, whose Appetit is low, or Oyl who are not easily wrought upon. For if it comes short of its end, it neither digests itself, nor will it suffer other things to be digested: Four Ounces are the usual Dose. If it be mixed with Water, and made a *Hydrelaum*, we may give it to ten Ounces. But when it do's not Operat, it surcharges the Stomac more than the

the other. 'Tis only proper when we want to soften and qualify some sharp Ferment sticking to the Plaits of the Stomac, and withal to evacuat it. I have already given the Analysis of Oyly Bodies, and therefore shall insist no longer on this Subject.

Melted Butter.

Melted Butter is look'd upon by some as a Vomit. But I question if any Physician could ever use it for that end.

Oxymel.

Simple Oxymel is made of Honey, Water and Vinegar; it is not much Emetic. But that of Squills is better; 'tis made thus; we mix the Squills with Vinegar, and that to Hony; then we Boyl all together. And an Ounce or two of it given to such as Vomit easily, will Operat very sweetly.

Asarum.

Asarabacca upon a Chymical Anlysis affords some Urinous Spirits laden with Volatil Salts, a great deal of Oyl, some Liquors tainted with Acidity, and a large quantity of Earth. Its Root given in substance from half a Dram to a Dram will Vomit pretty softly. It may likewise be infus'd in Wine from two Drams to half an Ounce, and the Infusion exhibited will produce the same effect. Its Leaves are also Emetic. Seven or Eight of 'em infus'd in a Glafs of Wine make a good Vomit. But if ye Infuse either Root or Leaves in Water, they become only Diuretic; and are recommended by *Vanbelmont* for Obstruſtions in the Bowels. *Rulandus* commends this Medicine in Quotidian and Tertian Feavers, Asthma's and Loosenesses. His way was, to take a Dram of the Root Pulveris'd, and exhibit it in five or six Ounces of the Water of *Carduus Benedictus*, or that of Baum, Horehound or Hyssop. After 'twas given he order'd the Patient to be cover'd up close, whereupon it first caus'd sweat, and afterwards vomiting.

Coloquintida.

Coloquintida is an Apple or Fruit of an Indian Plant, known by the same name. Its Pulp, that is, the membranous Leaves, and its Seed are both very bitter, and give a very red high Tincture to the Solution of Turnesel. Now this red Tincture is destroy'd by the Addition of the Oyl of Tartar per Deliquium. This I take

take it, is a Proof of Acidity. This Apple do's not ferment neither with *Aqua Fortis* nor Spirit of Vitriol. Its Decoction in common Water makes but little impression upon the Tincture of Turnesel. The Pulp boy'd makes no visible change at all. It seems, some Alkaline Salts are let loose, that cramp the active Particles. A Tincture extracted from it with Brandy makes the Solution of Turnesel redder, than simple Brandy do's. The Powder of the Seed or Pulp given from six Grains to twelve, will Purge both upwards and downwards, but it gripes horribly. 'Tis us'd for evacuating of the Pocky Ferment; But I would not prescribe it by it self neither in simple Powder, nor in the Form of Troches made up with Tragacanth. It must needs be corrected; or else mix'd with other Purgatives, to check its corrosive Force.

The Volatil Spirit of Sal Armoniac is its best Corrector, which perhaps breaks and dissolves the Texture of the thin Membranes of the Pulp, and so hinders their sticking to the Coats of the Stomach and Guts, which seems to be the cause of all the Inconveniences that attend 'em; or else this Spirit destroys the Acid Particles.

Black Hellebor, upon the least Fire imaginable, gives a very sharp Spirit, that is, a Phlegm laden with a penetrating Volatil Salt, some Oyl, some Phlegm, and a little Fix'd Salt. It makes no Impression upon the Solution of Turnesel. 'Tis probable some part of its purging Force is lodg'd in the Volatil Salt. 'Tis true, Saffron and Speedwel yield Spirits as sharp as this, which do not purge at all. But the Volatil Salt of *Hellebor* has something particular. Perhaps 'tis not a pure unmixed Salt. But whatever 'tis that makes *Hellebor* purgative, certainly its Volatil Salt is the Author of its Vertues in all Diseases proceeding from an Acid. The Roots of black *Hellebor* purge both upwards and downwards, pretty violently. In some sorts of Hypochondriacal Melancholy, 'tis us'd with good Success. It may be given from a Scruple to a Dram in Infusion. *Paracelsus* reckon'd it the best of all

all the Purgatives; he pretends that it cures the Apoplexy, Gout, Dropſie, and Epilepſie. But, as I take it, 'tis a Medicine that ſhould not be frequently uſ'd. For, as *Ceſius* ſays, it does not always benefit the Sick; but it always harms thoſe that are well. However, for Madneſs and Hypochondriacal Melancholy, it may be corrected and exhibited with other Medicines.

With Brandy we make an Extract of it that purges from Four Grains to Ten, being diſſolv'd in ſome Spirituous Vehicle; and is recommended for the ſame Diſeaſes as Black Hellebor. White Hellebor is yet more violent than the Black, and therefore is only uſ'd in Sneezing Powders.

Gutta Gamba.

Gutta Gamba is a Juice or Gum which flows from an Indian Plant that trails upon the Ground. It diſſolves with eaſe in Water, as containing no Roſinous Parts, and gives it a yellow muddy Colour. The Solution of Turneſel makes no other Impreſſion upon this Water, but what may ariſe from the mixture of their Colours. The Spirit of Vitriol, and other Acids, are ſo far from changing its Colour, that they rather ſeem to preſerve it. But the Oyl of Tartar *per Deliquium* makes it clear and reddiſh. Whence we may conclude, that this Gum is plentifully ſtor'd with Sulphureous Particles, which being diſpers'd by the Oyl of Tartar, give a reddiſh Tincture; juſt like that of the Solution of common Sulphur with the ſame Oyl. And it ſeems the Acids, if any there be, are wrap'd up in the Sulphur, and in no Condition for Action.

This Medicine purges violently both upwards and downwards, but does not gripe ſo much as Coloquin-tida; it is leſs Irritating, and melts down the Humors better. 'Tis particularly uſ'd in Dropſies, and in all other Diſeaſes, where we mean to evacuate ſerous Humours. Its Doſe is from Four Grains to Twelve.

Tobacco.

Tobacco is a Plant that requires Conſideration apart. Its Vertues are ſo great, and its Uſe ſo univerſal, that a juſt Diſcourſe upon it muſt needs be very acceptable. In General, 'tis tainted with an Acid; for it makes the Solution of Turneſel red. It yields

yields some acid Phlegm, some Urinous Spirits, and a great deal of stinking Oyl impregnated with a penetrating and as 'twere caustic volatil Salt. 'Tis very Emetick. Infuse a Dram of its Leaves in a Glass of Wine, and 'twill purge violently both ways. In Substance 'tis not safe. Put it into Digestion with Spices in the Spirit of Wine, 'twill yield a Tincture, a Spoonful whereof given in a proper Vehicle is a very good Vomit. Its Oxymel, Syrup, Distill'd Water, &c. are all Emetic. They're us'd in Chronical Distempers, where we have occasion to open and attenuate, as in inveterate Asthma's, Vomica's, Choaking Catarrhs, &c. 'Tis needless to mention the usefulness of its Smoak, given by way of Clyster in Colic Pains, its Powder snuff'd up at the Nose for Pains in the Head, its Smoak taken with a Pipe for the Tooth-ach, its Leaves chew'd for Catarrhs, its Decoction for washing of Ulcers, Scabs, &c.

Wild Cucumbers are likewise Emetic. Their thickened Juice, call'd *Elaterium*, is a violent Purge. When 'tis stale, we use it for the Dropsies, and other Diseases requiring strong Purgation. It ought to be mix'd with other Purgatives. It purges both ways from Four Grains to Ten. It must not be us'd till it becomes stale, otherwise 'tis too sharp. 'Tis stock'd with much Sulphur, and accordingly flames if we hold it to a burning Candle. But its Oyls contain a great deal of Salt.

Ipecacuanha, is a Root imported from *Brasil*. It contains an Acid embarrass'd in Oyl and Earthy Particles. Its Powder gives a red Tincture to the Solution of Turnsel, almost such another as Allum, but not quite so strong. It purges both upwards and downwards. In Loosenesses 'tis very serviceable, being given from half a Dram to a whole one in Broth; when it Vomits, it cures almost any Looseness, both by diverting the Humors, and furnishing the Stomach with Stiptic parts.

The Indian Fruit is the product of the Plant call'd *Ricinus* or *Ricinus Americanus*. One Nut, or the half of one separated from the Rind, will purge violently both ways.

The

The Kernel gives a red Colour to Blew Paper, but not so high a Tincture to the Solution of Turnfel. Perhaps the Paper rubbing against the Oyl sucks up the Acid Particles and so gains a red Colour; whereas the Acids being still incorporated with the Oyl cannot have the same effect upon the Solution of Turnfel. However that faint redness which it gives to the Solution of Vitriol, is presently defac'd by adding the Oyl of Tartar. In fine the Medicine is rarely us'd; and indeed 'tis not any way proper for those whose Fibres in the Stomac and Guts are very delicate and fine. Some Empirics pretend that it brings forth Worms, but we know that all violent purges produce the like effect. In fine 'tis a Medicine that contains a very sharp Oyl.

*Mineral
Emetics.*

Mineral Emetics are more stiddy and less violent than Vegetables. The Operation of Coloquintida, Elaterium, Tobacco, Spurge, &c. depends upon their burning Corrosive Salts, or Oyls impregnated with 'em; and consequently they cannot work upon us without burning, grating and tearing the Stomach, and adjacents Parts. Whereas Antimony presents us with several Emetic Remedies that have neither Taste, nor Smell, nor any mark of Corrosiveness; and yet Operat as effectually as the Corrosives themselves. And besides, have this Peculiar Quality, that their Operation is quickly over, and they leave no troublesome heat in the Parts. Next to Antimony, we reckon Vitriol and Allum, as being moderately Acid, and not over-irritating. I proceed to examine 'em all apart.

Antimony.

Antimony is a Metallin Body, which contains a Regulus near akin to Lead, and a Sulphur like to common Brimstone, together with some Earthy and Saline Particles.

In order to discover its Internal Disposition, let's consider its Peculiar Qualities.

1. It Purifies Gold, by destroying the other Metals 'tis mix'd with, and yet making no alteration upon the Gold.

2. It dissolves like Gold in *Aqua Regia*, and not in the other acid *Menstruum's*.

3. If we mix Antimony with *Aqua Regia*, or *Aqua Fortis* impregnated with Salt; and after the *Regulus* begins to dissolve, pour upon it cold Water, we will see a Sulphur swimming above the Water, not unlike the common Brimstone.

4. If we beat and mix it with an equal quantity of Salt Petre, and throw it by Spoonfuls into a red hot *Crocus Metallorum* Crucible, it flames up with a noise; and if we cover the Crucible with a Tile, after every Detonation, we have the remaining substance call'd *Crocus Metallorum*, or Liver of Antimony.

5. Crude Antimony will neither Vomit nor Purge. Neither will it perform any such Operation if it be Detonated and Calcin'd with a triple quantity of Nitre; then it becomes *Diaphoretic Antimony*; but if it be long kept 'twill relieve an Emetic Force.

6. Mix equal parts of Antimony, Tartar, and Nitre. Kindle 'em with a burning Coal, in order to Detonation. Then Pound the whole Mass, and put it into a Crucible cover'd and surrounded with a strong Fire. After 'tis melted, take it off the Fire, and when the Crucible is Cold, take out the *Regulus*, which if the Weather is Hot and Clear, will be starry; because then the top will not be much sooner cool than the bottom, and so the matter continuing Liquid, the Crystals of the Antimony will have time (as 'twere) to set themselves in order.

7. This *Regulus* is thus separated from the Sulphur by means of the Salts that became Alkali's by the Detonation. And accordingly the Solution of the Dross in a Cellar is an Alkali, that Precipitates all Solutions of Metals in acid Vehicles. If we Boil the *Scorie* in Water, then Filtrat the Liquor and mix it with Vinegar, it Precipitates a Red Powder call'd the *Sulphur Auratum* of Antimony.

8. We may joyn several Metals to the *Regulus*. Generally we pitch upon Steel. We put twice as much Antimony as Iron, and so make the *Regulus*.

K

without

without Tartar; the Alkali of the Iron supplying its Room. This Regulus is fittest for being made in the Form of a Cup, because 'tis less sharp.

*Antimonial
Nitre.*

9. In Preparing Diaphoretic Antimony. If instead of Antimony we put the Regulus to a triple quantity of Salt Petre, 'twill never retrieve an Emetic Virtue, tho' expos'd to the Air. If we wash this *Crocus* or *Calx* of Antimony, and Evaporate the Lotion, it yields the Antimonial Nitre, which is more Alkaline than the ordinary sort. 'Tis Digestive, Laxative, and admirably fitted for checking the Fermentation of continual Feavers.

*Calcination
of Antimony.*

10. Crude Antimony, or the Regulus pulveris'd and calcin'd with a Burning Glass, make a great deal of Smoak, and yet become heavier. Some pretend that this *Calx* is Sudorific.

As Glass.

11. Put Antimony well calcin'd by Sun or Fire, into a Crucible surrounded with a strong Fire; 'twill melt. Then if ye pour it out on a hot Marble Stone, it becomes the Glass of Antimony. If ye treat the Regulus in the same manner it becomes a red Glass; add a little Salt to it, and it becomes yellow; or twice as much Borace, and 'tis perfectly white.

*The Magi-
stery.*

12. When the Sulphur of Antimony is prepar'd, that is, when the Antimony is dissolv'd in *Aqua Regia*, and the yellow Powder is separated by common Water: At the same time we may separate a White Powder that falls to the bottom; Wash it, and reserve it for use, under the name of the Magistery of Antimony; 'tis a gentle Vomit and Purge. Its Dose is from four to twelve Grains.

*The Flow-
ers.*

13. Mix equal quantities of the Regulus, or of Crude Antimony and Sal Armoniac, in an Earthen Body, cover'd with a Glass head. They will Sublimate the *Flowers* of Antimony. Then Wash the Flowers in Water and dry 'em, and ye'll find 'em much better than the common sort. The Red and Yellow are only fit for use, the White being too sharp. Two Grains of these Flowers well Pounded and mix'd with Twelve Grains of *Mercurius Dulcis*, make an Admirable

rable Purgative that seldom Vomits. These Flowers may be further Corrected by Digesting 'em in Spirit of Wine for some time, and then kindling the Spirit.

14. Take these Flowers and Distil upon 'em the *Fix'd Flower* Spirit of Salt four times. Then kindle the Spirit *ers* of Wine thrice; and so ye have the *fix'd Flowers* of Antimony. Some pretend they are altogether Purgative.

15. Put Antimony and Corrosive Sublimatum Pulveris'd, into a Retort till it be half full, set it upon a Fire of Sand, and fit a Recipient to it, and a white Oyl, or the Butter of Antimony will come over; which ye must melt by holding some Hot thing to the Neck of the Retort. When ye perceive a *The Butter* reddish Vapor coming, then unlute the Recipient, *and Cinnabar* and shift it with another that needs not be luted. Then Augment the Fire. And when ye break the Retort; ye'll find in the Neck of it the Cinnabar of Antimony, which is a good Sudorific.

16. Put the Butter of Antimony into an Earthen Pot with a large quantity of warm Water: 'Twill Precipitate a white Powder call'd *Mercurius Vita*, or *Mercurius Algarot*. This Powder *Riverius* corrects and tames *Vita* by drying it upon a Tile or hot Stone, till the stinking Vapor be exhal'd. If ye Precipitate it in Urine, it assumes a reddish Color, and is call'd *Sala's Mineral Rose*.

17. Pour softly the Spirit of Nitre upon the But- *Antimonial* ter of Antimony, till the Fermentation be over. *Bezoar*. Then dry the whole, and pour fresh Spirit of Nitre upon it, to see if it smoaks. When it do's not smoak, dry the Mass and Calcine it, as being the *Bezoar Mineral*.

18. Pour some Acid Spirit, for example, the Spirit *The Tin-* of Nitre upon the Powder of Antimony; dry it and *Sture* repeat the same Operation four times. Then Calcine it two Hours in a Crucible upon an open Fire. Take the calcin'd Powder and digest it in Spirit of Wine twenty four Hours; 'twill give the *Tincture* of Antimony: which is sudorific and somewhat Purgative.

Its Dose comes between six and fifteen Drops. As for the Infusions, Decoctions and Syrups that Antimony may afford, I wave 'em as being common.

*Emetic Tar-
tar.*

19. Take equal quantities of white Tartar and the Glas of Liver of Antimony. Pound 'em. Boyl 'em for twelve Hours in common Water, stirring it often, and sometimes pouring in fresh hot Water. Then Filtrat and evaporat the Liquor; and ye have the Emetic Tartar.

*Soluble E-
metic Tar-
tar.*

20. If instead of white Tartar ye put the *Vegetable Salt* ye'll have a soluble Emetic Tartar.

*The Appli-
cation of the
Experiments*

Now the first and second of these Experiments seems to insinuate that some parts of Antimony resemble Gold.

The third and fourth discovers something like common Brimstone.

The fourth and fifth intimat that 'tis an opposite to Nitre.

The sixth and eighth discover some parts like those of Mettals, particularly lead.

The seventh gives us to understand that it possesses a Sulphur somewhat different from the common sort. However 'tis possible these two Sulphurs have only this difference: That the one is fix'd by Acids, and the other dissolv'd by Alkali's. From whence we may draw this Consequence, that Acids effectually correct the Purgative or Emetic Minerals, whose violence proceeds from Sulphur dissolv'd by Mercury or a Volatil Alkali.

The eleventh shews, Antimony may be vitrify'd. And its Glas retains the Emetic force; notwithstanding that its Salts and Sulphur are rendred insipid and void of smell, like those of the *Regulus* or *Crocus*.

The twelfth and Fourteenth argue that Acids cramp its Emetic force.

The fifteenth and sixteenth prove that its Sulphur reduc'd to Cinnabar becomes tame: But the adding of Acids will render it Corrosive.

The

The Seventeenth vouches that the Spirit of Nitre corrects other Acids.

The Nineteenth shews the Tartar of Wine can receive a considerable share of the Vertue of Antimony, without sinking its Weight.

Vitriol, as I intimated before, is an Acid mingled *Vitriol*, with Mettallic Earths. White Vitriol purified may be us'd inwardly for a Vomit. But to understand its Nature thoroughly, we'll run through the most considerable Experiments that belong to it.

1. Dissolve white Vitriol in the Plegm of Vitriol or in any other Liquor. Then Filtrat the Liquor thro' *Gilla*, brown Paper, and evaporate two thirds. The Remainder will run into Crystals in a cool Place. These are call'd the *Gilla*. They Vomit, being given from one to two scruples.

2. Calcine Vitriol till it begin to be reddish; and no longer left all its Acids be gone. Then dissolve it *The Salt* in Water, and you have its Salt, which Vomits somewhat more gently than the *Gilla*.

3. Calcination makes Vitriol first white then red, *The Calci-* and last Brown. If we take the white and fill two *nation*, thirds of a Retort fitted to a Recipient; 'twill yield a Phlegm upon a slow Fire. Then shift the receiver and give a strong Fire; 'twill yield several Acid Spirits of different Force. For, when we rectify 'em in *The Spirits* a Glas Body with a Head and Receiver, upon a Fire *and the Oyl*, of Sand; there comes first a Phlegmatic Spirit somewhat Acid, commonly miscall'd *Sulphureous*; then a common Acid Spirit, which passes for the Spirit of Vitriol; and at last an Oyl that is yet more Acid and stock'd with Mettallic Parts. This Oyl ferments and turns hot almost in any Liquor; probably by reason of the Struggle betwixt the Salts and Mettallic Parts.

4. Marcasite, or the Dross of Iron, contains Vitriolic Parts. Now a Distillation from them must needs be much the same with that of common Vitriol. Perhaps some Sulphureous Spirit is mingled with it, but that makes no considerable Alteration. *Vanbelmont's labori-*

ous Distillation, I take it, is much at one with the rest. As for the Spirits drawn from Artificial Vitriol, I think 'em very useless. They require a great deal of Pains to no purpose.

*The quali-
fying of its
Corrosive
Qualitie.*

5. Some have vainly attempted to make the Spirit of Vitriol more Volatil and smooth by the mixing and distilling of its Volatil Spirits and other Contents. Whereas all the Product is only a Volatil saline Spirit approaching to the Nature of Sal Armoniac. Now that may be obtain'd by simply mixing 'em together, without the Trouble of a useless Distillation.

*The Essence
of Rabel.*

6. The Spirit of Wine distill'd with the Oyl of Vitriol, do's powerfully tame it: And during the Distillation they give a very fragrant smell. If ye cohobate the Oyl upon its own Salt, and then distill it with the Spirit of Wine, it gives the *Essence of Rabel*.

*Glauber's
Sal admira-
bile.*

7. Take as much Nitre as the Spirit of Vitriol can dissolve; and distill the whole in a Lembeck. The Spirit that comes over will be the Spirit of Nitre; and the Remaining is *Glauber's Sal Admirabile*, which seems to be much akin to Tartar vitriolated.

*The Magi-
stries.*

8. Dissolve white Vitriol in Water and pour upon it the Oyl of Tartar. 'Twill precipitate a Mettallic Earth, that may be call'd the *Magistry* of Vitriol. It Purges, being given from fifteen to thirty Grains. Sometimes two scruples of it will prove Emetic. When ye have separated this precipitate, take the Liquor and evaporate it, and ye have a *Tartar Vitriolated*, which is much smoother and meeker than that of the Oyl of Tartar mix'd with the Oyl of Vitriol.

*Sulphur of
Vitriol.*

9. Many Preparations have been invented for obtaining the Sulphur of Vitriol. But to my Fancy they're all cheats. They give only a Crocus of Iron or Copper, or else a Precipitation of some Mettallic Earth. The Spirit of Wine, the Oyl of Turpentin, &c. impregnated never so much will not produce what they look after, no more than the Sublimation of Colcothar with Sal Armoniac, which only presents us with the Mettallic parts sublim'd to a Sal Armoniac, and call'd *Ens Veneris*.

*Ens Vene-
ris.*

10. Calcine the Vitriol of Steel. Expose it to the Air and dissolve it in some Liquor. So ye obtain a very Styptic and Vulnerary fix'd Salt. The Dose for External use is one Ounce mix'd with eight Ounces of Liquor. If ye use it inwardly for stopping of Claps, or apply it as a Collyrium to the Eyes, ye must take an Ounce of the Salt to twenty four Ounces of Liquor.

*The Stripick
Fix'd Salt.*

Now the first and second Experiment shew that the fix'd and Metallic Part of Vitriol makes it Emetic. The third and fourth prove, that Acid and Volatil Spirits are not Emetic. The sixth teaches, that Sulphurs partaking of Acidity are more capable to mitigate the sharpness of Vitriol, than those of another Stamp. The Seventh concludes the Spirit of Vitriol more fix'd and acid than that of Nitre. The eight and ninth make it out that there's little or no Sulphur in it. The tenth shews that its styptic Quality is in some Measure lodg'd in the fix'd and Metallic parts.

*The Application of the
Experiments*

There needs not be much said of the other Emetics taken from other Mettals; Such as those of Mercury, namely the Red, white, Yellow, and Green Precipitates, calcin'd Mercury, &c. Most of these Medicines are unfit to be exhibited by themselves for vomiting. When I come up to the Antivenereal Remedies, I shall amplify more upon their Preparations and Vertues.

*The Emetic
Preparations of
Mercury.*

Rock Allum given to a Dram is sometimes Emetic; especially that sort of it that inclines to a reddish Colour. Probably it contains some Vitriolic Parts, and operates by vertue of its Metallic Particles.

Rock-Allum.

Vitriol and Silver mix'd with Acid or Corrosive Salts will furnish us with more Emetics; that is some Crystals and Artificial Vitriols, that truly differ but very little from the Natural sort, or at least have much the same Emetic Vertue. And therefore I think it needless to insist upon em. I pass by the Emetics prepar'd from Rats-bane, Orpine, &c. as being of fatal Consequence.

All the Emetics that the Animal province affords are either so sharp or disrelishing that they're scarce us'd.

*Animal
Emetics.*

Such are hot Urine, the Infusions of the pairings of Nails in Wine, &c.

To what has been said I'll only add one Remark, namely, that some Medicines will cause vomiting, tho' not taken inwardly at the Mouth. Clysters of Urine and the Apple of Coloquintida will make some Persons Vomit. And Liniments of the Oyls of Coloquintida and Tobacco being applied outwardly will oftentimes produce the same effect.

I have known several Persons rubb'd over (for the Scab) with the infusion of Tobacco in Wine, that Vomited upon it. And I remember I saw one seiz'd with Hypochondriacal Vapors that always vomited upon the exhibiting of *Opium* either in Clysters, or by the Mouth.

A LIST of Emetic Medicines, and their Doses.

Seven or eight Leaves of Asarabacca beaten with Wine and press'd thro' a Linnen Cloath.

Asarabacca Roots given in Substance from a Scruple to half a Dram in Broth or any other Liquor.

The same Root infus'd in Wine from one to two Drams. Gutta Gamba from four Grains to twelve.

The Powder of Coloquintida in Substance from six Grains to ten: In Infusion twice as much.

The Powder of its Seeds from nine to fifteen Grains.

The Powder of black Hellebor in Substance from eight to twenty four Grains: In Infusion from a Scruple to two Scruples.

Elaterium from six Grains to ten.

The Roots of Ipecacuana from a Scruple to a Dram.

Tobacco in Infusion from a Scruple to a Dram.

The Indian Nut in Substance from half a Nut to a whole one.

Hot Urine from three Ounces to four.

The Extract of Hellebor from six Grains to ten.

The Gilla of Vitriol from ten Grains to two Scruples.

The

The Salt of Vitriol from ten Grains to a Dram.

Soluble Emetic Tartar from four to fifteen Grains.

Common Emetic Tartar from four to ten Grains.

The Regulus of Antimony from four to six Grains.

Crocus Metallorum from four to six Grains.

Mercurius Vitæ from two to four Grains.

The Sulphur Auratum of Antimony from two to six Grains.

The Emetic Antimonial Flowers from two to six Grains.

The Magistery of Antimony from four to ten Grains

The FORMS of Vomits for Apoplexies, Lethargies, and other Sleepy Distempers.

If the Emetic Wine is not in Readiness and the Circumstances urge, throw some Salt into the Persons Mouth, and make him swallow a Glass of Wine.

Emetic Wine.

Take an Ounce of Crocus Metallorum Pulveris'd; pour upon it two Pound of good White-wine in a Glass-bottle. Stop the Bottle close for twenty four Hours, shaking it often. Then let it settle and decant the Liquor. Its Dose is from half an Ounce to two Ounces. It may be mix'd with any other Liquor.

An Emetic Powder.

Take twelve Grains of the Roots of black Hellebor in Powder; four Grains of Gutta Gamba, and fifteen Grains of Asarabacca Roots. Mix all together and pound 'em well. Then Exhibit the Powder in a Glass of Wine or any convenient Liquor. 'Tis very serviceable to Hydropical Persons.

Emetick

Emetic Oxymel.

Take two Ounces of the dry'd Leaves of Tobacco, and as much of black Hellebor Roots. Six Ounces of the dry'd Blades of Squills, I mean, those betwixt the Heart and the outer Rinde; half an Ounce of Cinnamon. Beat altogether to a coarse Powder. Mix it with six Pound of distill'd Vinegar in a long neck'd Glass-bottle. Stop it well, and let it stand a Month in the Sun. Then wring the Liquor thro' a Linnen Cloth and add to it eight Pound of Hony well skimm'd. Then boyl all to a due Consistence. 'Tis an incomparable Remedy for an Asthma; and gently Procures Vomiting. Its Dose is from one to two Ounces in any convenient Liquor. In Hypochondriacal Distempers 'tis likewise very useful.

An Emetic Eleſtuary.

Take a Dram of Gutta Gamba, and as much of Elaterium; and half a Dram of Emetic Tartar. Dissolve all in three Ounces of the Extract of Juniper made in the Form of a Syrup. Then add a Dram of the Oyl of Tartar, and half an Ounce of Cinnamon in Powder; and so reduce the whole to the Consistence of an Eleſtuary. 'Tis given from half a Dram to two Drams in any proper Vehicle. For Cachexies and Dropsies 'tis incomparable.

Emetic Troches or Paste.

Some make Emetic Paste by incorporating the Glass of Antimony or Crocus Metallorum well pulveris'd with Starch or Gum Tragacanth, or with a Paste of any sort of Meal; and then drying the whole. But I cannot approve such Preparations. 1. Because Antimonial Emetics operat better in Infusion than in Substance. 2. The Gluy Ingredients prolong and encumber the Operation. Thus we find the strongest Persons are frequently much disorder'd by such Emetics. And for the same Reasons I would likewise reject Emetic Pills.

An

An Emetic Syrup.

Take an Ounce of the Liver of Antimony. Boyl it softly with a Pint of Verjuice and a Pound of Sugar to the Consistence of a Syrup. The Dose; from half an Ounce to two Ounces.

For a Loathing of Meat, Bitterness in the Mouth, Inclination to Vomit, &c.

Take eight or nine Grains of soluble Emetic Tartar; and dissolve it in three spoonfuls of Wine. Mix the Solution with some Laxative Pilsane, and 'twill prove very Effectual.

A Vomit for Madness and Venomous Bites.

Take Venice Treacle to the bigness of a Bean. Dissolve it in the third part of a Glass of Wine: And fill up the Glass with the first Oyl of Olives, and let the Person drink it up. About a quarter of an Hour after exhibit a Dram of the Confection of Hyacinth, and the next Day a Potion of *Lepidium Magnum*, *Angelica*, *Garlic* and Venice Treacle Infus'd in White-wine. This Vomit is preferable to all others, by Reason that 'tis less provoking to the Stomach, which is already gall'd and gnawed by the Poisonous Particles. Nay on the contrary, the Oyl qualifies and ties up these pointed Parts; and the Volatil Sulphureous Remedies that back it are proper for the same purpose.

A Vomit for qualifying the Corrosive Juices remaining after the taking of Poyson, such as Rats-bane and the Corrosive Sublimatum.

Take six Ounces of the Oyl of sweet Almonds drawn without Fire. In want of that Oyl ye may take Oyl of Olives.

The

The Emetic Syrup of Quinces.

Take an Ounce of *Crocus Metallorum* in Powder, and near a quart of the clarified Juice of Quinces. Set 'em in a Glass Vessel upon a Fire of Ashes for twenty four Hours. Then let it boyl a little, strain the Liquor thro' a Cloth, and add to it a Pound and a half of Sugar, and then boyl all to the Consistence of Syrup. If ye please ye may add a few Drops of the Oyl of Cinnamon. A spoonful given either in Wine or by itself works very sweetly. It may be us'd in Loosenesses, &c.

An Emetic Clyster.

Take about a Pint of the Urine of a Man that drinks Wine. Dissolve in it an Ounce of the *Hiera of Coloquintida*. Make a Clyster. Sometimes it causes vomiting; at least it may be us'd for promoting the Operation of Emetics and Purgatives, when we want a severe Medicine.

An Emetic Decoction.

Take a Dram of *Crocus Metallorum*, two Drams of crude Tartar, and half a Dram of Cinnamon. Pulverise all, and boyl 'em four Hours in a Pound and a half of *Carduus Benedictus* Water in a Vessel well cover'd. Then take it off the Fire, add half a dram of the Oyl of Tartar per deliquium, and strain the whole thro' a piece of Cloth, wringing it very hard. Dose; one or two Ounces in any Convenient Liquor.

An Emetic and Purgative Potion.

Take six Grains of good Emetic Tartar. Dissolve it with an Ounce and a half of Manna in five Ounces of the Water of *Carduus Benedictus*; make a Potion. 'Tis peculiarly Serviceable in Malignant Feavers.

Another

Another Potion.

Take two Drams of Senna. Infuse 'em in' a Glass of Water. Strain the Infusion thro' a Linnen Cloth; and add to it an Ounce of Emetic Wine and an Ounce of the Syrup of Peach Flowers. Sometimes ye may add two Ounces of Emetic Wine. The Potion is useful for sleepy Distempers.

An Emetic distill'd Water,

Take equal parts of good Tobacco slic'd in pieces, and the Pblegm of Vitriol; let 'em digest for twenty four Hours in a Vessel well cover'd upon hot Ashes. Then put all into a Glass Body, fitted with a Head and Receiver, and distill slowly upon a Sand of Fire. The distill'd Spirit is given from three Drams to an Ounce in any proper Vehicle.

An Emetic that Operats by Smell.

Take the stinking Oyl of Tobacco. Hold it some time to the Nose, and 'twill oftentimes cause Vomiting.

C H A P. II.

Of Anti-Emetics, or the Remedies that stop Vomiting.

The Error of some Physicians. **S**OME Physicians are of Opinion, that Emetics ought always to be given in large Doses; thus, think they, they are quickly thrown up again, and as their Abode in the Stomac is but short, so their Irritation is less than that of smaller Doses. But Experience gives the Cause against them. We meet every day with Instances of Persons that by the over-bearing Violence or Quantity of Emetics are thrown into Convulsions, and perplex'd with an eternal Vomiting, which frequently ends in Death. I would therefore advise all Physicians to be cautious in giving violent Emetics in large Quantities, for if the Irritation of the nervous Parts of the Stomac be continu'd and inflam'd to that Degree, that the soft Crust which guards the internal Membrane is quite scrap'd off, then every thing becomes Emetic, whether Broth or Anti-Emetic Potions.

Sometimes sharp Humors nestling in the Stomac will of themselves raise the same Symptoms, and provoke the Coats of the Stomac in the same Manner, without taking any Emetic Med'cine. Nature becomes extravagant, and the sharp Humors provoke the Fibres of the Stomac, throw them into Convulsions, and gall them to that Degree, that even after the Evacuation of the sharp Humor the Contraction still remains, and Victuals or any other Liquor, tho' never so unprovoking, will be forcibly cast up.

Upon such Occasions; if we suspect sharp Humors remaining still in the Stomac, then we joyn a gentle Vomit to some Purgative, or at least endeavour otherwise to promote the Vomiting, by throwing down
large

large quantities of Hot Water and other Liquors. 'Twas in this sense that Hyppocrates said; that vomiting cures a vomiting.

Just after the Operation of an Emetic we should not allow the Patient to eat, especially if the vomiting be quite over, unless he be apt to swoon. If the Vomiting continue longer than it ought to do, then we may Exhibit fat Broth; or the Oyl of Almonds. But we frequently find that the vomiting only prevails when we administer something inwardly; and in that case 'tis better to give nothing at all; unless the Patient's strength be quite exhausted. Then indeed we are oblig'd to allow 'em a Glas of warm Wine, or some fortifying Anti-emetic.

If we find that our Emetic Medicines are too strong, 'tis easy to tame 'em with some acid Liquor; for that turns their force downwards.

If the excessive vomiting be occasion'd by Corrosive Salts, such as those of the Corrosive *Sublimatum*, that People are oftentimes poyson'd with: In that case, our surest Refuge are Oyls and Oily Liquors, such as Milk, &c. If Ratsbane be the Cause, Oyls are of admirable use: And after them Citrons and other Acids, for fixing the sharp and exalted Sulphurs. In general, when an excessive vomiting arises from Irritation, and that the Irritating Cause is taken off, there's nothing more serviceable than Fomentations of Worm-wood, Mint, Sage, Penny Royal, Wild Majoram, &c. infus'd in Wine, or a Plaster of Venice Treacle applied to the Stomac. At the Mouth we exhibit Cordial Waters mix'd with Venice Treacle, and the Syrup of white Poppies or Laudanum; and at the same time inject Clysters to divert the Humors.

Fomentations good against Vomiting.

If the sharp Humors remain still in the Stomac we exhibit Cream of Tartar, Juice of Limons, Verjuice preserv'd, Tartar vitriolated, the Vitriol of Steel, and all other Acids qualify'd for mortifying fixing and congealing of the exalted Sulphur.

If the Humors are not sharp but bitter, we joyn fix'd Salts to the Acids. Crollius recommends a scruple

scruple of the Salt of Wormwood given in a spoonful of the Juice of Limons. To which we may add the Powder of Ivory mix'd with the Vitriol of Steel and a double quantity of Sugar-candy; Elixir Proprietatis, mix'd with the Spirit of Vitriol, &c.

If the Remains of the Ferment be Acid, which seldom happens, the fowre Acid Belchings will give us to know so much. In that Case we give Crabs-Eyes, Powder of Coral, Salt of Tartar, Salt of Wormwood, Elixir Proprietatis, &c.

The Difference of Vomitings.

Some Persons have naturally such a cross Disposition of the Ferments of the Stomac, that they're always molested with Belchings, Loathings and Vomitings. Now in this Case we must heedfully mind the Nature of the Ferments. *Prosper Martian* says, such as are troubled with Acid Belchings, will never be cur'd while they drink Wine, by reason of the Tartar and Acid Salts lodg'd in it. Therefore they must bid adieu to Wine, if they expect an effectual Cure. On the other side, proceeds he, those who are perplex'd with bitter Belchings, are easily cur'd by the Use of Wine. Its Tartar corrects and brings under the exalted Sulphur. I have oftentimes observ'd that People molested with Acid Belchings and Vomitings have been cur'd by the Infusion of Wormwood in Wine, but then they drank nothing else. Besides, 'tis worth minding that some Wines possess but little Tartar or Acid, and consequently are more proper for Acid Belchings. Such are the *Alicant, Spanish and Canary Wines*.

Since the Tartar of Wine affords many Remedies against Vomitings, 'twill not be improper to throw its History into this Place.

The Tartar of Wine.

The Tartar of Wine is an earthy Body interlac'd and cram'd with Acids, which, during the Fermentation of the Wine, incorporate with some oily and volatile Parts, and is push'd out upon the sides of the Cask. That which is the Product of White-Wine, is call'd white Tartar, because it has a little of that Colour; and for the same Reason that of Red Wine is call'd Red Tartar. If we boyl White Tartar in Water,

ter, and strain the Decoction thro' a *Manica Hippocratis*; and then evaporat, 'twill run into Cryſtals call'd the *Cream of Tartar*; which is given from half a Dram to three Drams in Broth.

The Salt of Tartar is made thus. Take Tartar, and wrap it up in Paper, then throw it upon burning Coals; afterwards make a Lixive with it in Water. Filtrat and evaporate the Lye, and ye obtain a Salt which may be given from ten to thirty Grains.

If, instead of diſſolving the calcin'd Tartar in Water, we diſſolve it in a Cellar, it becomes Oyl of Tartar *per Deliquium*, and is given from one to two Scruples in any Liquor. 'Tis much the ſtrongest of all the fix'd Alkali's.

Mix two Parts of the Cream of Tartar with one of its fix'd Salt, put 'em into hot Water, and strain the Solution thro' a Cloth, then evaporat, and ye'll have the *vegetable Salt*, which is given from half a dram to three drams in any proper Vehicle.

Tartar vitriolated is prepar'd by mixing the Salt of Tartar diſſolv'd in ſome Liquor, with the Spirit of Vitriol, and evaporating the Moiſture in a Body upon a Fire of Sand. 'Tis given from ten Grains to Thirty.

Chalybeat Tartar is prepar'd by boyling four Parts of the Cream of Tartar, with one Part of the Filings of Iron, and a ſufficient Quantity of Water, in an iron Kettle; the Boyling is continued two Hours, then the Liquor muſt be ſtrain'd thro' a Cloth, and put into an earthen Veſſel in a cool Place to ſettle, ſo 'twill run into Cryſtals, which muſt be gather'd and taken care of; then we may evaporate the remaining Liquor, and ſet it in the Veſſel in the ſame Place again, where 'twill preſent us with new Cryſtals. Their Doſe comes between one and two Scruples.

Crumble the Tartar into ſmall Pieces, and fill up two thirds of a Retort with 'em, put the Retort upon a reverberatory Fire, and fix a Receiver to it. At firſt a gentle Fire will bring over the Flegm, then a brisker degree of Fire preſents us with the black Oyl and Spirit,

rit, which we separate from one another with a Funnel lin'd with brown Paper, then rectify the Spirit in a Limbeck, and ye may give one or two Drams of it in any Liquor. The Oyl is only fit for external Use.

The Volatil Salt.

But the Spirit will be yet better, if instead of crude Tartar we took the Lees of White-Wine, well ripen'd and dry'd; and after the first Distillation, rectify the Spirit in a long-neck'd Phial with a Head and Receiver: 'twill yield a volatil Salt and a urinous Spirit. The Dose of the Salt is fifteen Grains; and that of the Spirit a Scruple.

The Oily Volatil Spirit.

This Spirit may be dulcify'd and freed of its Smell by circulating with the Spirit of Wine impregnated with Spices, and then being distill'd both together. This Spirit is given from one to two Scruples.

Terra Foliateda.

Pour upon the Salt of Tartar as much distill'd Vinegar as the Salt will imbibe, let the Moisture evaporate and dissolve what remains in Spirit of Wine. Filtrat this Solution, and distil off the Spirit with a slow Fire. At the bottom of the Limbeck ye will find the *Terra Foliateda* of Tartar; which is given from one to two Scruples, in any convenient Liquor.

If ye dissolve it in a Cellar, 'twill yield a purple Liquor, that may be given to the same Dose.

Its Tincture.

Melt and Calcine the fix'd Salt of Tartar till it become red; and let it circulate with the Spirit of Wine on a Fire of Sand; thus 'twill give a Tincture, which may be Exhibited in any Liquor from fifteen Drops to half a Dram.

Salt of Wormwood.

The Salt of Wormwood is a Salt drawn from the Ashes of Wormwood, as other Lixivious Salts. Dose from a Scruple to a Dram.

Elixir Proprietatis.

Elixir Proprietatis is a Tincture of Myrrh, Aloes, Saffron and some Spices drawn with Spirit of Wine. Towards the End we add some Acid Spirit, and after sufficient Digestion decant the Liquor. The Dose is, from ten to Thirty Drops. As for the other Anti-Emetic Med'cines, I shall have Occasion to insist upon 'em elsewhere.

A LIST of Anti-Emetick Medicines.

ACIDS.

The Juice of Barberries,	}	From half a Spoonful to a whole one.
Juice of Citrons,		
Verjuice,		
Vinegar,		
Cream of Tartar, from half a Dram to three Drams.		
Tartar Vitriolated, from Ten to Thirty Grains.		
Nitro Vitriolated, from Ten to Thirty Grains.		
The Spirit of Vitriol in Juleps to a grateful Acidity.		

ALKALI'S.

The Salt of Tartar, from ten to thirty Grains.		
The Salt of Wormwood, from a Scruple to a Dram.		
Crabs-Eyes, from fifteen Grains to a Dram.		
Cinnamon in Hot Wine to two Scruples.		
Saffron in Powder to fifteen Grains.		
Mint,	}	Externally apply'd.
Wormwood,		
Mugwort,		
Penny Royal,		
Wild Marjoram,		
Coral in Powder from fifteen Grains to a Dram.		
Shavings of Ivory, from ten Grains to a Dram.		
Volatil Salt of Tartar, from eight to fifteen Grains.		
Diaphoretick Antimony, from one to two Scruples.		
The Extracts of Juniper, Carduus Benedictus, and Worm-wood, of each from ten Grains to half a Dram.		
Cinnamon Water,	}	From half an Ounce to a whole one in any Vehicle.
Treacle Water,		
Mint-Water,	}	From two to six Ounces.
Baum-Water,		
Carduus Benedictus, &c.		
Elixir Proprietatis, from ten to thirty Drops.		
Laudanum, from half a Grain to three Grains.		
Venice Treacle, from a Scruple to a Dram.		

*Confession Alkermes, from a Scruple to a Dram.
Confession of Jacinth, from a Scruple to a Dram.
Prepar'd Amber, from one to two Scruples.*

Anti-Emetic Recipes.

An Anti-Emetic Potion.

Take a Dram of the Salt of Wormwood, an Ounce of the Syrup of Limons, and five Ounces of Mint-Water: Mix all together, and make a Potion for two Doses.

Another Anti-Emetic Potion.

Take an Ounce of the Syrup Diacodium, half a Dram of the Powder of Vipers, and four Ounces of the Water of Carduus Benedictus. Mix all together, and make a Potion to be exhibited at Night.

An Anti-Emetic Bolus.

Take half a Dram of Venice Treacle, incorporated with a Grain of Laudanum, and ten Grains of the Salt of Wormwood. Make a Bolus.

Another Bolus.

Take fifteen grains of the Salt of Wormwood, half a Dram of the Extract of Juniper, and twelve Crabs Eyes. With a few drops of the Syrup of Quinces make a Bolus.

A Stomachical Plaister.

Take of Gum Tacamabac and choice Storax, of each two Ounces; Amber, Cloves, Mastic, Aloes, and Myrrh, well pounded, of each three Drams; Oyl of Nutmegs and
Cam.

Camphyr, of each a Dram; Cinnamon two Drams; Liquid Storax as much as sufficeth. Make a Plaister to be spread on Leather in the form of a Scutcheon. It stops vomiting, dispels Wind, and fortifies the Stomac.

A Fomentation.

Take a handful of Mint, as much Wormwood, and two handfuls of Red Roses. Chop 'em; and boil them in a Pint of Red Wine. When ye take it off the Fire, add three Drams of the Tincture of Cinnamon. Steep a Cloib into it, and apply it warm to the Stomac, during the Vomiting.

An Anti-Emetic Opiat.

Take Coral, Pearl, and Crabs-Eyes, all prepar'd, of each a Dram; Salt of Wormwood, a Dram and a half; Laudanum, ten Grains; Castor, two Scruples. With the Syrup of Quinces make an Opiat. Dose, a Scruple or two.

CHAP. III.

Of Purgatives.

THE Excrements contain'd in the Guts are voided at the Fundament, by means of the Peristaltic motion of the Guts, and the Pressure of the Middriff and Muscles of the Abdomen. Now this Evacuation is hinder'd, when the Excrements being too hard or sticking too close to the Guts do not obey the impulsive motion, or when the Peristaltic Motion is disorder'd, or else when the Guts are inflam'd as in a *Volvulus*; or straiten'd by too narrow a Confinement as in the case of a Rupture.

Hence we infer that Purgatives Operat either by Irritating the Guts or augmenting their Peristaltic Motion,

Motion, or rendring the Excrements Liquid. This last point they make good several ways. Sometimes being Liquid they dilute the Excrements; Sometimes they stop the orifices of the milky Vessels, and so preserve the Liquid parts that might otherwise pass on to the Blood: Sometimes they enter the Blood, and occasion a more copious Separation of Choler, Pancreaticall Juice, and Serum of the Guts.

*Irritating
Purges.*

Such purging Medicines as only provoke the Guts without reaching the Blood, occasion only the voiding of what lies in the first Passages.

*Melting
Purges.*

But those which enter and influence the Blood and Humors, occasion the Accession of large Quantities of Blood into the Glandules. Now the Glandules of the Guts being thus crouded are more capable to strain out the Serosity of the fermenting Blood than any other, because they are at the same time squee's'd by the fleshy Fibres of the Guts, they being contracted by the Provocation of the Purgative. For the repeated Pressure of these Fibres squeezes and empties the Glandules, and consequently since their Passages are empty, they'll be the readier to receive fresh Serum from the Blood, Now these are the effects of most Purgatives.

*The difference be-
twixt Pur-
ges and Vo-
mits.*

Purges are distinguish'd from Vomits by this Quality, viz. they are slower in Irritating than Vomits are: and accordingly have but little Operation in the Stomac. Indeed if the Pylorus be more shut than ordinary, or beset with slimy matter that stops their Passage, then their stay in the Stomac makes 'em Emetic: And in like manner Emetics turn Cathartic when they happen to pass the Stomac before they fall upon Action.

*The differ-
ent ways of
Purging.*

Purgatives may be receiv'd not only at the Mouth, but by way of Clyster, and by means of insensible Transpiration. But a much smaller Dose will serve for to be taken in at the Mouth, than otherwise. That way of purging by means of insensible Transpiration is almost appropriated to Children. We apply Cataplasms and Pomentations to the Navel for that Purpose.

Purpose. The Ingredients are Volatil and Irritating things, such as are able to pierce thro' the Pores into the Abdomen and irritate the Guts so as to augment their quibbling Motion. Clysters operat also by provoking the Guts or else dilating the Excrements. 'Tis possible that both Clysters and Purgatives applied to the Navel may enter the Veins and melt down the Serum of the Blood. But that is both unfrequent and uncertain.

There are two Opinious here that meet us in our Way, which 'tis worth our while to examine. 'Tis true they are ridiculous enough, but yet they have several Patrons among Physicians.

The first is fasten'd upon Hippocrates. 'Tis, that *Whether Purgatives, by Vertue of a mutual conformity of Substances, operat by atraſting ſuch Humors as they're allied to.* 'Tis in his Book *de Natura Humana* that Hippocrates ſeems to make this advance Theſe are his Words. *Si enim homini alicui Medicamentum dederis, quod Pituitam ducit, pituitam tibi Vomēt; et ſi pharvacum dederis bilem ducens, bilem tibi Vomēt; eadem ratione et bilem atram purgabit, ſi Medicamentum exhibueris quod bilem atram ducit.* He paſſes on farther, and then gives his meaning clearer in theſe Words. *Et enim Pharmacum ubi Corpus Intraverit, primum quidem ducit id quod ex omnibus in corpore exiſtentibus ſibi maxime ſecundum Naturam familiare fuerit, deinde vero etiam alia trahit ac Purgat.* In his Book of Purging Medicines he ſays further: *Oportet igitur primum bilioſis dare quod bilem Purgat, pituitoſis quod pituitam, hydropicis quod Atram, Atrabiliariis quod bilem atram, &c.* Galen and his Votaries having read Hippocrates, and ſeeing that Manna, Aloes, and Rhubarb, cauſ'd yellow or bilious Stools; that Turbith gave ſlimy, Senna black, and Elaterium ſerous Stools; theſe ancient Men I ſay going upon the above-cited Authority and theſe Obſervations, concluded that the firſt rank Purges Cholera, the ſecond Pituita, the third Melancholy, and the fourth Serum. Hence the Claſſes deriv'd their reſpective Names, viz. Cholagoga, Pblegmagoga, Melanagoga and Hydragoga,

*The Ancients
their Divi-
ſions of
Purgatives
confuſed.*

The falsity of this Opinion is very conspicuous. What conformity is there between Manna or Violets and the Bile? Or between Elaterium or Coloquintida and the Serosities of our Bodies? *Mesue* and *Fernelius* were so flunn'd with such unaccountable Doctrine, that they chose rather to attribute the various Effects of Purges to something they knew not what, which the one call'd Heavenly, and the other occult Qualities. But still they were so much wrought upon by the above-mention'd. Observations, that they verily believ'd that some Purges were peculiarly devoted to some Humors, and others again to other Humors. But to shrift their Experiments a little. 'Tis certain that most Purgatives give Tinctures to the Excrements. Thus Rhubarb and Aloes taint both the Ordure and Urine with a yellow Colour, and the Infusion of Senna and all Preparations of Vitriol turn the Excrements black; now these Tinctures they either give of themselves, or else by encountering the Salts in our Bodies acquire the new Colours. For Example: The *Gilla* of Vitriol occasions black Stools. Now the Blackness proceeds from the Conjunction of the Parts of the Vitriol with the Saline Particles lodg'd in the first Passages. The Colour of the Excrements therefore depends either on the Natural Tincture of the Medicine, or the mingling of the Salts and Sulphurs of our Body with those of the Medicine. I grant indeed there are some Purges that melt sooner in the Stomac than others, and so provoke the *Porus bilarius*; or shake the Stomac more, and so squeeze the Gall out of the Gall-bladder; and others again that pass the *Duodenum* before they are dissolv'd, and by reason of their later Irritation, display most of their force upon the Humors contain'd in the Glandules of the Guts. Upon these and several other Accounts we should not prescribe the same Purges for all Complexions and in all Diseases, tho' at the same time they neither operate by choice of Humors, nor by attracting those they are said to resemble.

Why some
Purge Bile
and others
Serum.

As for the pretended Authority of *Hippocrates*, 'tis Hippocrates
 of no great force upon this account: Because the Book *tes bis Opi-*
de Natura Humana upon which 'tis groundd is branded *nion confi-*
 as imposturous. It advances an infinite number of derved.
 false positions, and besides goes upon Principles direct-
 ly oppsite to those which that excellent Person lays
 down in his Book *de Veteri Medicina*.

The falsities 'tis cram'd with are so staring and ob-
 vious, that Galen himself owns, above half the Book
 could be none of that great Man's. Who would be so
 mad as to think that *Hippocrates* said that four pair of
 Veins arising from the Head are distributed thro' the
 Body? Do not his other Writings tend just to a con-
 trary point? Witness his Books, *of Principles*; of the
 Heart; of the Dissection of Bodies, &c. Let us there-
 fore do justice to his Saced Memory, and declare
 that the Book *de Natura Humana* is unjustly fasten'd
 upon him. And that *Galen* would not have brought
 him in as the Author of its first part, but that it coun-
 tenanc'd the Principles he went upon.

Moreover 'tis possible the Author of that Book did
 only make use of the above-cited Expressions to reach
 the Principles he was about to attack. For the only
 end he aims at is to prove that there are different
 Substances in Man's Body, in opposition to those who,
 as he says himself, having observ'd that Medicines eva-
 cuat only Humors, and Wounds let forth only Blood;
 upon these Remarks they conclude, that these are the
 only Subjects of Life. Now to convince 'em of their
 Error he shews that there are different Humors in
 the Body, and that one? Medicine, if it be violent, will
 first evecuat one and then another, beginning with
 the Humor that it most resembles. Thus, we see
 this Doctrine was only thrown in by the bye as a
 proof to evince what they denied.

As touching that Passage of *Hippocrates* his Book,
 of Purging Medicines; we may allow the Author to
 speak according to the Receiv'd Opinion of his own
 Time. But we find all the Use he makes of the mat-
 ter, amounts to no more than this, That there are
 some

some Persons and some Diseases that require particular Purgatives, and therefore a Physician must sometimes make choice, and prefer one to another. Now thus much we are willing to allow; and if we accompany *Hippocrates* a little farther, we'll see that he never mean'd more. In his Book, *De Locis in Homine*, he forbids Persons under a Jaundice the use of such Medicines as evacuate Bile, though at the same time he owns their Constitution is bilious. So that he only brought in that Observation as an Instance to prove, that one Purging Medicine may be proper for one Person, and improper for another.

But to go farther: Put the Case, that *Hippocrates* were not of our side, what then? That is not the only Point he's mistaken in. Anatomy was so lame in his Days, and the Preparations of Medicines so imperfect, that 'twere a wonder if that excellent Person had hit the Truth upon all scores. His Diligence and Justness in making Observations was his distinguishing and shining Character. Now, in his Observations of Diseases, where that Talent is only employed, we find but few Mistakes. 'Tis only in such places where he reasons upon the Principles of Anatomy and Physicks, that he stumbles most.

Vanhel-
mont and
Asclepias
their Mi-
stake.

The Second Opinion we are about to encounter, is imputed by *Celsus* to *Asclepias*, and was lately revived by *Vanbelmont*. 'Tis, that Purgatives are not to be us'd at all, as being rank Poyson, apt to corrupt the Humours and Substance of our Bodies. For, say they, 'tis not the Humours nor the Causes of Distempers that are thrown out by Purgatives; 'tis the true Substance of our Bodies melted down. Thus, continue they, we see that a healthy Man becomes sick upon Purges, he turns lean and wither'd; his Voice becomes hoarse; the Firmness and Vigor of Body decays; and oftentimes tremblings and fatal Convulsions seize the shatter'd Body. They plead further, that 'tis the Sense of this pernicious Tendency that puts Physicians upon mixing the softest Purges with Correctives to qualify and cramp their virulent Disposition. And for the same

same Reason, they never prescribe Purges in Acute Diseases, till the matter be concocted, as being sensible that Nature already weaken'd by the Distemper would be quite defeated by the Noxious Medicine. When Nature Triumphs and gets the Ascendant then they administer Cathartics, and give 'em the Glory of the Conquest, that Nature only purchas'd. In fine, say they, we need no other proof than that of Venice Treacle, which equally defeats both Purges and all other Poysons; and the Experience of healthy Persons, who upon a Purge void as large quantities of Corrupt Humors, as those who are sick.

Now this Opinion will be easily defeated, if we call to mind what I discours'd upon the Natures of Victu-^{Their Rea-}son's Answer'd
als, Medicines and Poyson. Any Medicine unseasonably exhibited loses its Medicinal Quality, and becomes either Nourishment or Poyson. If Nature cannot subdue it, then unavoidably it becomes Venomous. And thus all Physicians grant that violent Cathartics not meeting with matter ready for Evacuation, will melt down the Nutritious Humors of the Body. This was Hippocrates his meaning, *Aph. 35. sect. 2. Sana habentes Corpora Purgantibus cito exolvuntur, ut illi qui pravo utuntur Cibo.* But, notwithstanding that Purges are prejudicial to Healthy Persons, yet they may be very useful to those who are sick: Because they rescue oppress'd Nature from the Insupportable load of bad Humors, and by this means the sick Person retrieves his Strength and Health. And accordingly we see, some sick Persons after frequent Purgations are so far from being weaken'd that they gain new Strength.

But to go yet farther. I maintain that the weakness which follows the evacuation caus'd by some Purgatives is not sufficient proof of the Corruption of nutritious Humors. The opening of an Apostheme, and Evacuation of the Purulent matter is oftentimes attended by a notable Weakness, and yet we cannot say that the corrupt matter would have serv'd to nourish and keep up the Person's Strength.

Vanbelmont is very much out, in imagining that Correctives are added to enervate the Purgative Medicine. On the contrary, many are added to augment their force, witness the Salt of Tartar, the most proper Corrective of Scammony, which is order'd on purpose to keep under the Acids that might congeal it and cramp its activity. He is yet further wide of the point, when he pretends that Purges are only administered after the Concoction is over. In my Practice upon Acute Diseases I have made good the contrary at large. He adds, that after Concoction Purges are to no purpose, as if Nature were already Master of the Field; but he do's not distinguish an imperfect Concoction or Crisis from those that are compleated.

'Tis true, when a Crisis is quite finish'd, Nature will do its own Business it self. But when 'tis only imperfect, we must assist her. 'Tis a Physician's Business to observe her Motions and interpose his helping Hand where he finds her hamper'd with a Crowd of Humors, which tho' they are in some Measure subdu'd and separated, yet if they be not carried off will return to the Ferments and renew the former Troubles.

Hippocrates was of this Mind *Apb. 12. sect. 2. Quæ relinquantur post Crisim Recidivas facere solent.* Besides, daily Experience is sufficient Evidence,

To pass on. 'Tis an untruth, that Venice Treacle is an antidote against the Poyson of Purges. It only lessens the Purgative Force by vertue of the Opium it contains, as all Anodyn Medicines will do.

To conclude. A Healthy Man do's not void the same sort of Excrements as a sick Person. 'Tis true their quantity is much the same. Because the good Humors are purged out. But the effect is very different. For the Healthy Man becomes Sick, and the Sick Person retrieves his Health.

I shall only add one Remark; namely, that *Vanbelmont* himself do's sometimes recommend violent Purgatives. For Instance, he says, that a Person full of Pocky Ferments is more benefitted by *Coloquintida*
in

in one day, than by a fifteen Days Course of Guajacum, China, Sarsaparilla, &c. He likewise extols the extract of Juniper-berries, and at the same time owns that it Purges.

Purges ought to be administred when the Guts are *Indications* cram'd with glutinous Humors ; when the Sweet-bread, Liver, Mesentery and adjacent parts are more stuff'd than ordinary ; when the Mass of Blood is overcharg'd with saline coarse parts that encumber its motion ; or when 'tis overrun with serosities which part the Salts too far, and so disturb the Concoction and other Preparations in our Bodies. Now in all these cases 'tis proper to throw out the offending Humors by the Passages that Nature has appointed for that purpose.

Matter lodg'd in the Guts is most naturally voided at the Fundament. The Sweatbread, Liver and Mesentery having pipes which open into the the Guts, are likewise to be clean'd that way. And the whole Mass of Blood is with greatest ease brought to part with its impurities in the Glandules of the Guts, Liver and Sweetbread. Because in perfect Health it makes use of the same Conveniency of Evacuation to the same purpose. *Natura enim semper intendit Mundificare sanguinem, dum separat quod officit.*

In order to know if Humors nestle in the first Passages and adjacent parts, we must enquire if the Patient *Signs of im-* be feverish ; if he be molested with the Colic Pains *parties in* about the Loyns, a heaviness upon the Knees ; if the *the first Pas-* Piles or Terms are unseasonably stop'd : If the Abdomen be stuff'd without Pain, Fever or Distention ; if a violent Pain sit under the Middriff : If a Fever return frequently ; or intermit and observe regular periods : In all these cases we conclude that the lower belly is croud'd with impurities. For the Colic is caus'd by sharp Humors, rending the Guts. Pains in the Loyns and Joynts, coming on a sudden, do generally arise from the thickness of the Blood, unqualifying it for a due circulation. Now the Blood can never turn thick on a sudden without a Fever, unless
Gross

Gross Humors be blended with it; and the shortest way to be rid of these, is to throw 'em upon the Guts and Glandules of the Abdomen. A Suppression of wonted Evacuations do's either proceed from Impurities in the first Passages, or else occasions them by corrupting their Ferments. The Belly stuffed is a plain Mark of Humors crouded into the Abdomen. And in fine, the frequent Relapses of Fevers are the Result of the Foulness of the Stomach and Guts. These are the Signs requiring Purgation, and pointed at by *Hippocrates* in his Aphorisms, and in his Book *de Veratri Ufu*; and by several of the best Authors.

Other Indications.

Robust Persons are fitter to be purg'd than weak ones. Winter is a more proper Season than the Summer, providing the cold be not over-violent; because the Humors are then thick, and naturally bend downwards; whereas in Summer they are lighter, and take better with Vomits. Besides, when the Weather is extremely hot, we ought not to purge without an urging Necessity, for fear of over-weakening,

Counter-Indications.

Persons that have weak Stomachs ought to purge seldom. Big-belly'd Women, especially towards the beginning or end of their Reckoning, Histerical and Hypochondriacal Persons, and such as are troubled with Ulcers or Imposthumes in the Guts, are forbid Cathartics. In fine, such as complain of no Indisposition should not take Purgatives, because as *Hippocrates* says, Aph. 36. Sect. 2. they are thus rob'd of the good Humors, that keep 'em up, and become an easy Prey to bad ones, like those who feed Fowl. For the same Reason 'twill be improper to exhibit Cathartics to Persons of a full fat Complexion, because they abound in Blood, and a strong Med'cine may occasion the Bursting of its Vessels.

Purgatives must be cautiously given to such as labour under *Empyema's*, slow or hectic Fevers, internal Apostemes, Consumption, or Coughs. 'Tis often observ'd, That Purges call up and provoke the Cough.

To conclude, Inflammations in the Stomac, Liver, or any Part of the Abdomen, forbid Purges. In burning Fevers, especially in the beginning, while the Humors are crude and glutinous, Purgation is amiss; unless the first Passages be visibly over-charg'd with Humors, that threaten to joyn the Blood, and over-run the internal Parts.

Before Purging, it may not be amiss to moisten and *Precautions* open the Passages, that the Cathartic Med'cine may *about using* be less imbarass'd; and may work the more effectually, readily, and with less Pain. To this Purpose *Hippocrates* says, *Aph. 9. Sect. 2. Quorum Corpora purgare voles, ea Fluxilia reddere oportet.*

Moreover, as *Hippocrates* advises, we must inquire if the Patient be easily wrought upon, or not; or if he ever purg'd before, and if laxative Food uses to make him soluble. *Turpis enim est Calamitas, Medicamento purgante dato, Hominem occidere.* Upon this Account we ought always to begin with weak Med'cines, and not to venture upon the strong, till we see that the others have no Effect. But after all, that Rule does not always hold.

And here 'tis worth while to observe, That Purges work best upon an empty Stomac; and Vomits again are most effectual when the Stomac is full either of Humors or Viscuals. The Reason of the Difference is at Hand. Vomits do not pass on so quickly to the Guts when the Stomac is full; they stay in the Stomac and do most of their business there; whereas the others meeting with an empty Stomach pass on to the Guts, and having spent nothing of their Force by the way, have the more in store for the Guts. 'Tis chiefly upon this Account, that we usually prescribe Clysters the night before the Purge; that so the Guts being empty'd, the Stomac may be solicited to push forward the Matter it contains, and clear the way for the Purge.

We generally exhibit Purgatives in a Morning, because the Repose and Sleep of the Night bedews the Passages with a sort of Moisture, that the Action of

of the Day exhausts. Having taken in the Cathartic Med'cine the Patient may sleep an Hour or two; but when it begins to work, Sleep must be avoided, because it puts a Stop to the Evacuation. Cold also and extrem Heat are equally to be avoided.

*After the
Purge is
taken in.*

After the Purge is taken in, Viſtuals or Drink are altogether improper; indeed about three Hours after a little Broth may be allow'd, to make it work the better, by pushing down the Remains of the Med'cine, that may linger in the Stomac.

Sometimes we find that the Purge taken in causes a Squeamishness, and sometimes a Vomiting. To avoid these Inconveniences some are wont to hold an Egg under their Throat, and to smell to Vinegar, or hold some sowre Liquor in their Mouth. But oftentimes all these Contrivances are in vain. The Taste and Smell of the Purge is so harsh and disobliging to the Patient, that he cannot bear it. And therefore a Physician should have Regard to the Palate when he prescribes.

The greatest Part of the Ancient Physicians were wont to usher in Purges by Preparatives; and in Compliance with their System of the four Humors, pretended to prepare the Humor they were about to carry off. But now that the World is undeceiv'd, we use no other Preparatives but only such as clear the Stomac and first Passages, and put the Blood into a moderate Posture, at an equal distance from a lazy and rapid Motion; and qualify its Parts, so that they are not too glutinous or thick, but tractable and fit for Evacuation.

*The Corre-
ction of
Purgatives.*

If a Purgative be apt to gripe, 'twill be proper to joyn with it some aperitive Ingredients, such as the Salt of Tartar, soluble Tartar, &c. or else some Aromatical Things. Sometimes, notwithstanding all the Precaution imaginable, 'twill still gripe; and in that Case we must e'en make the Person take down a great deal of some soft Liquor, such as sweet Milk, fat Broth, &c. Thus such smooth Vehicles dissolve and disunite the Parts of the Med'cine, rendering 'em

less

less keen and griping, and lessening the Measure of their Operation. In the mean while, if the Gripings still continue, it may not be amiss to keep the Body at Rest, and endeavour to procure Sleep; by exhibiting first weak Narcotics, such as fresh *Venice Treacle*, and afterwards those of greater Force, such as the Syrup of Poppies, Laudanum, &c. Of this more by and by.

If we want to quicken the Med'cine, and promote its Operation, we may order the Patient to walk up and down the Room, and avoid Rest. See *Hip. Aph.* 15. Sect. 4.

Hippocrates observes, that if the Patient do's not become thirsty, the Med'cine has not purg'd enough. ^{Signs of a good Operation.} In earnest, the true sign of a comfortable Purge turns upon this, that the Humors evacuated resemble those which are sometimes thrown out by Nature to our Advantage, and that the Patient finds the Symptoms abated, and withal is not too much exhausted.

In continual Fevers and most acute Diseases Cathartics are commonly not administered till the Signs of Concoction appear, as much as to say, till the Fever be over. Those who countenance this Method, plead *Hippocrates* his Authority for it; and bring in several Places of his Writings for Proof. *Aph.* 22. Sect. 1. He says, we must evacuate concocted Humors, and not such as are crude; especially not in the beginning of Diseases, unless the Humors be much afloat, which generally they are not. Aphorism 24th of the same Section is further Evidence. There he advises to avoid Purgation in the beginning of Acute Diseases; or at least never to attempt it without mighty Reasons. In his Book *de Ratione Viſus in Morbis Acutis*, he forbids Purgation in the beginning of Inflammations in the internal Parts, because the Matter which causes the Inflammation is crude and clammy, and in no Condition to be evacuated, so that a purging Med'cine would either do nothing, or else carry off the innocent and useful Humors. He delivers his Mind much to the same

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Purpose

Purpose in many other Places, but at the same time seems to entertain contrary Thoughts by some other Expressions. Aph. 20. Sect. 1. is an Instance. There he says, when the Crisis is compleat, we have nothing to do to the Patient. Sect. 2. Aph. 29. he tells us, if we would move any thing in the Patient's Body, we must set about it betimes, and not put it off till the Disease be at the Height. Sect. 4. Aph. 10. he says, we must purge out of Hand in Acute Diseases, if the morbidical Matter be in Motion, and inclin'd to be gone. Sect. 1. Aph. 21. he advises us to take our Measures for Evacuations, by the Tendency of natural Motions. From whence I gather, That since in Acute Diseases, we frequently meet with a natural Tendency to vomit or purge, therefore we may safely exhibit 'em.

*The Use of
Purging in
intermitting
Fever.*

For my Part, I am of Opinion, That in intermitting Fevers, both Vomits and Purges may be given from the beginning. My Reasons are these, 1. The Humors being lodg'd in the first Passages are easily carry'd off. 2. After the Paroxysm, the Matter which occasion'd it, is grown fluid, concocted and fit to be evacuated. For, according to *Hippocrates de veteri Medicina*, the Humors are concocted when the Fever and other Symptoms abate. 3. Nature's Precedent in this is somewhat considerable. Oftentimes towards the End of the Fits she appears in a Looseness or Vomiting. Now we cannot say that this Vomiting or Looseness is symptomatical, because it only takes place when Nature has baffled the Disease, and obtain'd the Victory. I go upon the Supposal, That every Fit of an intermitting Fever should be look'd upon as a particular Disease, and its respective Conclusion be reckon'd an imperfect Crisis. I shall amplify no further upon this Subject. Whoever desires further Satisfaction upon this Point, may consult my Treatise of *Acute Diseases*.

*In continual
Fever.*

In continual Fevers, whether putrid or malignant, if we find that Humors nestle in the first Passages, especially in the Stomach, they ought to be evacuated.

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Vomiting is the more proper Method. Now Humors lodg'd in the Stomac are easily smell'd out by a bitter Taste in the Mouth, a Squeamishness, Propensity to vomit, Head-Achs, &c. In these Cases we prefer a Vomit to a Purge upon several Accounts, 1. Because a Vomit only fetches out what is lodg'd in the Stomac, and so comes off. Little or nothing of the Med'cine mixes with the Chyle in the Guts to disturb the Blood. 2. A Purgative Med'cine sojourns so long among the tedious Windings of the Guts, that its liquid Parts may be consum'd and dry'd up by the Fever, before it can enter upon Action.

We may therefore conclude upon one Point, that when Humors ferment in the Stomac, a Vomit is needful. To carry the Argument further. I maintain, That in those continual Fevers, which have any considerable Remissions, Cathartics are allowable in the beginning. The same Reason that pleads for intermitting Fevers will conclude for these. If we find Matter working in the great Guts, we may inject Clysters; but when the small Guts and Hypochondria are the Scene of Action, let Purges be administred; but with this Proviso, that we take care to moisten and keep up the Body, and procure Rest. Thus Hippocrates himself in his Book *de Ratione Viſus in Acutis*, prescribes Cathartics against Hypochondriacal Pleurifies.

In fine, to reconcile Hippocrates with himself, we must needs own that Evacuations are necessary, when the Humor causing Acute Diseases is fluid, or when the first Passages are cram'd with thick Humors, which are apt to pass on to the Blood, and inflame the Disease. 'Tis upon this Account, that Vomits are so useful against the Acute Fevers which follow hard Drinking, or immoderate Eating, because they hinder the indigested Food and Drink in the first Passages to joyn the Blood. That Aphorism which exempts crude Humors from Purgation, should only be interpreted upon those which are already incorporated with the Blood, or fasten'd to solid Parts. Then indeed,

as Hippocrates says de veteri Medicina, the Humors being very sharp, and call'd up by the keen Medicine, might injure the Part they stick to; and upon that account we are to wait till Concoction qualify 'em. The Business of Concoction and Fermentation is treated at length, and set in a clear Light, in my Treatise of *Acute Diseases*, whither I refer the Reader.

The Difference of Purgative Medicines.

The Number of Cathartic Medicines is almost infinite. Some purge vehemently without Gripping; others purge much, and gripe to boot; and others again gripe horribly, and yet purge gently; some are only Laxatives, that is, they carry off what they find in the first Passages; others melt down the Humors in the Blood, and dispose 'em to a copious Filtration. However, in order to distinguish 'em, as they're suited to various Occurrences, I shall run through those that are most in Use. To begin with the weakest.

Cassia.

Cassia is now-a-days much us'd. Its Pulp put thro' a Sieve purges gently, it refreshes, and, as 'twere, liquors the Guts. We generally joyn it to Whey or the compound Syrup of Apples. I cannot much recommend it, unless in Pleurifies for Expectoration, or in a Heat or Difficulty of Urine, for qualifying the Sharpness; for 'tis so sluggish a Purgative, that it does nothing without a huge Dose, which is apt to overcharge the Stomach; and besides, its coarse Substance raises Wind in the Guts, and consequently gripes. To such as are easily wrought upon, we give an Ounce or an Ounce and an half. Its Bark purges more effectually than the Pulp, by reason of its sharper Salts. The Pulp must be taken from the Husks but very lately before 'tis us'd, otherwise it becomes soure, and then does a great deal of Harm. If ye want to correct its Windiness, take four Ounces of the Pulp together with the Seeds and Husks, boyl it in a pint of Water; then strain the whole. If ye please, ye may add other Purgatives, and treat 'em in the same Manner. 'Tis frequently us'd in Italy and France, but in colder Climats 'tis not so much in Vogue.

Manna

Manna is commonly given in for a sort of Dew sticking upon some Trees: But the Allegation is false. 'Tis only the Juice of these Trees condensated. 'Tis compounded of small stiff Stalks, which being put into Motion in the Stomach, occasion Contractions that reach to the Guts. It contains a great many Acids and some Oyls. The former are hem'd in by the latter, so that 'tis recommended for the disorders of the Breast, where strong Purgation is improper. We may draw from it an Insipid Water, that procures Sweat by Vertue of the Volatil Sulphur that's blended with it. There are several sorts of Manna: But that of Calabria is reckon'd the best. The white and fine Purges less than the common coarser sort. However at best its Purging force is very low, and for that reason 'tis only serviceable when we design gentle Purges, and have to do with tender Patients, such as Phthysical Persons, Big Belly'd Women, &c. The Purging Vertue is lodg'd in the Essential Salt it Possesses: Its Sulphur enters the Blood and subdues any prevailing Acid. 'Tis given in Broth to Children from two to four Drams, and to adult Persons from one to three Ounces. Its Sudorific Spirit is already mention'd.

The Leaves and Tops of Dwarf Elder distill'd Dwarf Elder present us with a Urinous Spirit, and a great deal of Oyl. Its Seed will likewise afford an Oyl; if we Digest it in hot Water, and then press out the Liquor, the Oyl will swim a top. The Oyl Purges, and therefore must lodge some Salts within it. The inner or second rinde of this Plant is very Cathartic; it Evacuates Serum, and may be very serviceable to Hydropical Persons. We give it by way of Infusion from two Drams to half an Ounce.

The Juice of its Berries is likewise Purgative. 'Tis given against the Gout and Dropsie, from one to two Ounces. *Quercetanus* alledges that they afford a Purging Water. Two or three Drams of the Seed added to any Emulsion, will render it Purgative. Some make a Tincture from 'em in Spirit of Wine, which

is much approv'd for the disorders of the Womb. Externally the Leaves of Dwarf Elder discuss and soften: They are apply'd by way of Cataplasin for the Gout, &c.

Elder.

Elder is near ally'd to Dwarf Elder: Only 'tis a little more Powerful. By its Analysis it gives more Acids and some Concrete Volatil Salts. Its Rinde and Berries are us'd in the same manner with those of Dwarf Elder. We make of its Berries a Rob or Juice that procures Urine and Sweat, and indeed the whole Product of the Plant do's the same. Its Tincture is better against Vapors than that of Dwarf Elder. The Decoction of its Flowers is a good Sudorific, and much us'd for an *Erysipelas*. Its Green Bark affords a Juice that works both upwards and downwards: We give it to Hydropical Persons from an Ounce to an Ounce and a half; and mix'd with Oyl and Wax it makes an admirable Ointment for burnings. Its Leaves are Emollient, Discussive and Anodyn. The Extract of the Berries is Aperitive, and Diaphoretic. If we please we may draw an Ardent Spirit from 'em. The whole Plant may be us'd in External Fomentations, especially for Hydropical Swellings.

Tamarinds.

Tamarinds loosen the Belly: What by Irritating, and Liqueuring the Guts. The Analysis of its Pulp brings plenty of Acid Liquors, some Oyls, and at last by a long Calcination we may have of the Ashes a Saline Salt. Both its Taste and these Experiments argue that its Principal, if not the only, Ingredient, is an Acid in some measure cover'd with Earthy and Oily Particles. The Crystals of its Essential Salt resemble Cream of Tartar. Tamarinds are us'd in such continual Feavers as require the mildest Purges. They only carry out what is contain'd in the great Guts; and oftentimes they have no Purging Effect at all; only they moderate the Heat of Feavers, tho' at the same time the Feaver will be sure to return with fresh Violence whenever their coarse Acid Parts come to be put in motion. Their common Dose is from an Ounce and a half to two Ounces. Oftentimes

times we infuse it with other Purgatives from half an Ounce to a whole one. Soure Prunes may supply its want.

Violets is a Plant that yields a concrete Volatil *Violets*, Salt, a great deal of Oyl, some acid Phlegm, and some Lixivious Salts. Its Principles seem to be well Temper'd, and equally blended together. And if I mistake not, 'tis upon the account of its Temperature that 'tis entitled to a softening smoothing Character. 'Tis certain, it loosens the Belly very pleasantly. But I Question if its Flowers have any such Purging Vertue as *Poterius* assigns 'em. He says that if we give a Dram they'll Purge very well. However I am sure that the Seed and the Cups enclosing the Flowers will Purge more effectually, as being possess'd of a more naked Acid. They not only carry off the Humours that nestle in the Guts, but likewise drain the Blood of its impurities. But after all, 'tis only proper for Children, and such as are easily wrought upon: Dose, from a Dram to two Drams in Substance, and twice as much by way of Infusion.

Fleawort Seed Purges gently. It enjoys Mucilaginous parts which embarrass sharp Salts in our Bodies. *Fleawort seed*. And upon that account is administred in Dysenteries and continual Fevers from three to four Drams in Infusion. But as I take it, it Purges little or nothing by it self. Its Mucilaginous Parts are as apt to cumber the Ferments of the Stomach, as those of a Foreign Original. The Mucilage of the Seed mix'd with Camphyr, the Juice of Crabs and Sugar of Lead, is very serviceable against burnings. If this Med'cine be us'd upon a Purging design, it should be mix'd with other Cathartic Ingredients.

The Herb *Mercurialis* do's not give any red Tin-*The Herb* ture to the Solution of Turnesel. Its Analysis brings *Mercury*, forth a great deal of Phlegm, much Oyl, a moderate quantity of Concrete volatil Salts, and Earth. Its Decoction and Express'd Juice loosen the Belly. A Laxative Syrup may likewise be made from it. But

'tis more us'd in Clysters than Potions, probably because of the large and burthensome quantity of its Dose. 'Tis particularly made use of in Cataplasms, Fomentations and Baths, for softening any part, or Curing Barrenness.

*The Juice of
Roses.*

The Juice or Decoction of pale Roses loosens the Belly, and carry's off slimy Matter when lodg'd in the Guts. *Poterrus* assures us that a Dram of the Powder of Roses will Purge very well. But his meaning must be appropriated to those which Smell well: For red Roses which do not Smell are rather Astringent than Purgative. Hence we may infer that their Purging force lyes in a great measure in a Subtil Sulphur and an Essential Salt, which mix easily with the Humours in the Guts. If any part of 'em reach the Blood; it puts a stop to the action of Corrosive Humours. They're us'd in loosenesses, and such cases as require only the cleaning of the Guts. The Juice is given from one to two Ounces, and the Syrup in the like Dose with any other Purgative.

*The Juice of
Fumitory
and Hops.*

The Juice of Fumitory, and that of Hops are bitter and unpalatable, and Purge but little. However they are made use of against the Worms, and when the Mass of Blood is overrun with Acids, by reason of their bitter and Alkaline Parts. Their Dose is from four Drams to two Ounces. 'Tis true, they sometimes Ferment in the Guts and so loosen the Belly, but generally they are look'd upon as Alteratives, Antihypochondriacal, &c. for Purging the Mass of Blood, and promoting Urine, Sweat, the Terms, &c. I shall have occasion afterwards to touch further upon 'em.

*Dodder, Polipody,
Dodder about
Thyme.*

Dodder, Polipody and Dodder about Thyme have much the same Vertues. In Hypochondriacal Distempers we are wont to mix 'em with other Purgatives. But to my Mind; those Diseases require stronger Cathartics. *Hippocrates* says, *Melancolicos infra Vehementius purgabit.* Besides, these Plants by themselves are not Purgative, and therefore must be reckon'd up with Fumitory and Hops among the Alteratives dedicated to Hypochondriacal Diseases. Their Dose

Dose runs between three Drams and an Ounce, by way of Infusion. When I come up to the Specifics, I shall give 'em a longer Visit.

Soldanella is a Plant that Purges Serum stoutly. 'Tis particularly made use of in the Scurvy and Dropsy. Its Dose in Substance or Powder is from half a Dram to a whole one: Its Juice is given from three Drams to an Ounce. In Decoctions or Infusions the Herb may be us'd more liberally. *Soldanella,*

Senna is given by way of Infusion from a Dram to half an Ounce. If the Liquor in which 'tis infus'd be made hot, it becomes so unpalatable that no Body can take it without a great deal of Reluctancy. It causes belching and sometimes gripings, especially if the Stalks be not pick'd out, or if the Correctives be omitted. The Preparations of Tartar correct it admirably well. It may be infus'd cold in Wine, or in cold Water mix'd with some acid, and then it purges with less Offensiveness to the palate, and likewise less Force. Where the Stomac is over-run with gross sour Humors 'tis happy enough. It may be given in Powder from a Dram to two scruples. *Senna.*

Rhubarb contains a great deal of Sulphur and some few alkaline Salts. It gives a Tincture, and dissolves like a Gum in Water. Oyl of Tartar added to its Tincture makes it more red, brisk and shining. It makes no change upon the Solution of Turnsol, nor that of *Sublimatum*. So that we may conclude, its Principal Vertue do's not consist neither in Acids nor Volatil Alkali's. It possesses some Earthy Parts that may render it astringent. And therefore, when 'tis tosted, it loses its Purging force, and becomes more astringent. It carries off what it meets in the Guts; and by Vertue of its alkaline and sulphureous parts keeps down the keen pointed Particles of the Blood. Accordingly 'tis admirably well fitted for Diseases attended by acidity in the Blood; such as Cachexies, the Jaundice, Hypochondriacal and some Hydropical Disorders, Dysenteries, Lienteria's, Celiac Passions, &c. For it wonderfully softens the Ferments that cause such Distempers, and retrieves the Firmness of the parts. *Rhubarb.*
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The weighty and Reddish sort is the best. In substance we give it from half a Dram to a Dram: In Infusion, from a Dram to half an Ounce: Its Extract from half a Scruple to half a Dram. Monk's Rhubarb may supply its Room, but then we must heighten the Dose.

Myrobalans. Myrobalans, especially the Citron sort, have the same effect with Rhubarb and are generally mix'd with it. Their Dose, whether in Infusion, or Substance, must rise higher than that of Rhubarb.

Gratiola. *Gratiola* or Hegehyssop purges almost at the same rate with Senna, only it sometimes is apt to cause a Vomiting. Its Leaves infus'd in Water may be given from a Dram to half an Ounce, and are very serviceable to Hypochondriacal Persons. Sometimes we dry the Leaves and give 'em in Powder from half a Dram to a whole one. *Etmullerus* makes a Magistery of 'em: He infuses the dry'd Leaves in common Water with Oyl of Tartar, till the Colour be pretty high: Then he filtrats the Infusion and precipitats with Allum Water. Then he poures off the Liquor and dries the Powder, which enjoys the same Vertue as the Plant. He makes the same Preparations almost upon all Vegetables. But, I take it, Vegetables whose principal Vertue is lodg'd in an Alkali, such as Rhubarb, these, I think, should be much maim'd and weaken'd by such a Preparation.

Bryony. *Bryony* Roots have an unpleasant smell. They give a red Colour to the Solution of Turnsol. By their Analysis we fetch from 'em a great deal of Acid, some stinking Oyls and concrete Volatil Salts. The Powder of the Roots purges strongly from a Scruple to half a Dram. Its Volatil Salts qualify it to penetrat and open, and therefore 'tis us'd in Dropfies, Cachexies, Asthma's, suppression of the Terms, and many other Chronical Distempers, such as the Palsy, Convulsions, Disorders of the Womb, &c. The Juice of the Root is of equal Vertue with the Powder, being given to half an Ounce. The Dose of its Decoction may rise to three Ounces.

Agaric

Agaric is a Mushroom that grows upon the Larch-*Agaric*. tree. We are wont to make Troches of it, adding Vinegar, and Ginger. Its Operation is very inconfiderable. We joyn it to other Purgatives by way of Infusion, from half a Dram to three Drams. 'Tis much approv'd for purging *pituita* from the Head, bringing down the Terms, &c. But I never could see any great feats it did. I've observ'd, when 'tis given in Powder, it provokes to Vomit, or rather causes a reaching and vain attempt to Vomit: For it sticks close to the Membrans of the Stomac, and being porous, sucks up the sharp or Acid Humors it encounters, and so becomes indirectly Purgative and aperient. By its insipid Taste, one would think, its Salts are cover'd with Oyl and a light sort of Earth; and perhaps 'tis upon the Account of the faintness of its Salts, that 'tis recommended in the Diseases of the Breast, particularly a Cough.

Scammony is the dry'd Juice of a Plant of the same Name. 'Tis Rosinous and will scarce dissolve in hot Water. If we pulverise it, it congeals in the Water. It gives a red Tincture to the Solution of Turnsol, tho' not quite so high as the Pulp of Coloquintida. But if ye Sprinkle it with Oyl of Tartar before ye mix it with the Solution, it has no such effect. Oyl, the Yolks of Eggs, Juice of Liquorice, and almost any things compounded of Oyls and Lixivious Salts, will render it Soluble in Water. Formerly 'twas prepar'd by mixing it with the Oily parts of Quinces; but we find by this means its force is lessen'd, it become glutinous and sticks to the Guts, and in fine its Operation proves tedious and uneasy to the Patient.

Now adays we are wont to expose it to the Steams of Sulphur upon brown Paper. 'Tis pretended, this Acid moderats in some measure its Acrimony without impairing its Activity. But to my Mind, 'tis so far from compassing any such end, that it makes the Scammony more Rosinous and less soluble; It fixes the sharp and active Parts, and disables it for the expected performance,

performance. Scammony Purges happily enough, from four Grains to twelve; and since the Vapors of the Sulphur have no other correcting Vertue, but that of impairing the purging force; 'tis therefore better to mix it with an equal quantity of Salt of Tartar, or Juice of Liquorice, or in fine to make it soluble by what means soever. When it becomes such, it has all the Preparation that's needful.

Buckthorn.

Buckthorn-berries afford a Juice which is extremely Purgative. By dissolution they yield a great deal of Acid Phlegm and Oyl, the quantity of the other Principles being very inconsiderable. Probably, 'tis the Volatil Acid that enables them to melt down the Mass of Blood, and fetch out such large quantities of Serum. Perhaps the Oyl serves to prevent the bad effects that the keen melting Particles might occasion. We use 'em with success in a Dropsy, Cachexy, Gout and Rheumatism; half an Ounce of the Juice of the Berries, or an Ounce of the Syrup will purge sufficiently. If ye please ye may boyl three or four Drams of the dry'd Berries in Broth, with a Scruple of the Salt of Tartar, and then strain out the Liquor. The Powder of the Berries will not admit of a higher Dose than a Dram or a Dram and a half.

Hermodactyls.

Hermodactyls are a Root, some say a Fruit, that contains a great many Alkaline Salts and Oyls, and little or no Acid. Accordingly it makes no impression upon the Solution of Turnsol, nor that of Sublimatum. When 'tis boyl'd in Water it gives it a yellowish Tincture, tho' the inner part of its Substance be white. Oyl of Tartar added to this Tincture makes it thicker and deeper. Whence we gather that it partakes much of the Nature of Gums. Since the Salts of this Medicine are unperceivable to the Taste, it must needs Operate slowly, or not at all till it be mix'd with the Mass of Blood. And therefore 'tis reckon'd good for correcting as well as evacuating the Lymph. 'Tis us'd with success for the Gout and Pocks. In Substance the Dose runs between a Scruple and a Dram; in Decoction, between two and four Drams.

Turbith

Turbith is a Root full of sharper Salts than those of Hermodactyls. It contains a great deal of Oyl. *Turbith.* 'Tis Gummy and somewhat Rosinous. But do's not make the Solution of Turnsol red. It will not dissolve easily in Water: The Oyl of Tartar added to its Tincture makes it thicker. It operates more quickly and effectually than Hermodactyls. The Salt or Oyl of Tartar is its only proper Corrective. 'Tis mightily cry'd up in Venereal Distempers; in the Scurvy, Gout, Dropsy, and Worms; for it corrects the Acidity of the Lymph, and occasions a more plentiful filtration; and upon that Account is recommended against the Distempers of the Brain, especially those that arise from Acids. 'Tis given in Substance from one to two Scruples; and by way of Infusion, from one to three Drams. Generally we joyn it to Hermodactyls.

Jalap is a Rosinous Root cut into slices and imported from the West-indies. Its Powder mix'd with the *Jalap.* Solution of Turnsol gives a light red Colour. This, I take it, is sufficient proof that it possesses some Acids, tho' much fewer than Scammony or Coloquintida: 'Tis full of Oyl and sharp Salts. Its Oily parts being congeal'd by the Acids, the sharp Salts are left at liberty to operate with utmost violence, and the more, because the Rosinous Particles, which, as I intimated above, arise from the mixture of Oily and Acid parts, these, I say, stick to the Coats of the Stomach, and heighten the Measure of the Operation. 'Tis no wonder then, that it produces violent effects. It pricks and Irritates the Guts; it enters the Blood, and brings off the serous part; and sometimes it melts the Serosities to that degree, that it proves sudorific. 'Tis us'd in the Scurvy, Dropsy, Intermitting Fevers, &c. In Substance its Dose comes between half a Scruple and two Scruples: In Infusion, between a Scruple and a Dram and half. Its Rosin is given against the same Diseases from six to twelve Grains in a Bolus or Sulphureous Vehicle. Were it not for some Pulp or Oyl that it contains, 'twould be altogether like that of Scammony.

The

Frangula

The middle Rind of the black Alder-tree resembles Rhubarb in its Taste. It quickly gives a faint red to the Solution of Turnsol. 'Tis good for Jaundice, Cachexies, and Loosenesses; we are wont to infuse it to a Dram in White-wine. If it be green, it proves Emetic. When 'tis dry we may infuse it together with an equal quantity of the *Vegetable Salt* in Water, and add some Manna.

Carthamus.

The Seed of Bastard Saffron Purges thick Lymph. 'Tis us'd in Asthma's, Jaundice, and Sleepy Distempers, from a Dram to half an Ounce by way of Infusion. 'Tis very Serviceable in a Cough, and inveterat Head-aches, probably because its Oily and Mucilaginous parts temper the acidity of the Lymph. Its Alkaline Salts entitle it to an aperient Vertue. I take it, it has somewhat Rosinous in it; and therefore would rather give it in Decoction or Infusion than in Substance. We may either infuse it in Wine or boyl it in Water, adding to it Soluble Tartar.

Aloes.

Shining Aloes is a bitter Gummy Juice. It dissolves easily in Water and Tinctures it with an Orange Reddish Colour, which improves upon the addition of the Oyl of Tartar. Its Powder gives a faint red to the Solution of Turnsol. Its proper dissolving *Menstruum* is Water, for then it leaves at the bottom of the Vessel a Resin that otherwise makes it gripe. And therefore the Extract of Aloes should only be prepar'd by the Evaporation of its Solution in Water. Its mucilaginous parts mix easily with the slime in the Guts, and so carry it off; sometimes to that degree, that it opens the Vessels. 'Tis Vertue is pointed against Worms, faulty Digestions, and suppression of the Terms. Its bitterness scars many from using it. We give it from a Scruple to a Dram. If ye exhibit a whole Dram, perhaps 'twill work less than a smaller Dose; and besides raise the Piles, especially in such as are Subject to 'em. Its Extract is given from fifteen Grains to two Scruples. Commonly we exhibit it together with Victuals, for fear it should irritate too much by it self. Its other fortifying and vulnerary Vertues shall be taken notice of elsewhere.

Lathy-

Lathyrus and Garden Spurge well prepar'd have the *Lathyrus*.
same Vertue as Scammony.

Garden Spurge is over-gripping, as well as all the *Laureola*.
Species of Mezereon and Spurges. I should be loth to
make use of such violent Medicines.

Mechoacan in Taste and Colour resembles Hermo- *Mechoacan*
daestyls, and comes near to the same Vertues. 'Tis
probable both their Principles may be the same. At
least the Doses are much at one; that is, in Powder,
from a Scruple to a Dram, and in Infusion to half an
Ounce,

Sagapenum is the dried Rosinous Juice of a Plant *Sagapenum*.
under the same Name. It may be given in Pills with
a little Cinnamon. It Purges sweetly from half a
Dram to a whole one. 'Tis hot; and attenuats and
dissolves. 'Tis imploy'd with success against Schirrus's,
Palsies, Epilepsies, and above all against Asthma's. Nor
is its external Vertue short of the Internal. For hard
swellings 'tis very Serviceable.

Gum Ammoniac is almost of the same sort, only it *Gum Ammo-*
Purges less. *niac.*

Turpentin is a liquid Rosin that flows from the *Turpentin*.
Larch-tree. It Qualifies the sharp Salts of Urine. In
the Clap or Gravel 'tis much admir'd. We give it in
Pills, or dissolve it in some Liquor with Oyl or the yelk
of an Egg. Dose, from half a Dram to a Dram. Ex-
ternally 'tis a healing Balm for all sorts of Wounds.

Peach Flowers come near to red Roses both in Taste, *Peach Flow-*
Vertues and composition. Only they purge better. *ers.*
If we boyl half a handful in broth, they loosen the Belly
and fetch away a great deal of Serum. We make a Sy-
rup of 'em, by infusing the Flowers in common Water,
and boyling it up with Sugar, in the usual manner.
The more different Infusions we make, the stronger
will the Syrup be. It may be given in any Laxative
Pisan to one or two Ounces.

Thus we see that one Purgative differs extreemly
from another. Tho' Cassia, Tamarinds and Violets,
purge by a cooling Vertue; yet Cassia peculiarly liquors
and supplies the Guts; Tamarinds abate the heat of
continual

continual Fevers, and by vertue of their Acid moderat the Fermentation of the Blood ; and Violets have no apparent acid at all. Aloes and Rhubarb are both qualified for retrieving the Ferment of the Stomac, and may be taken in with Viſtuals for that end. But Aloes puts the Blood in a Ferment, which Rhubarb do's not. Turbith, Hermodactyls, Mechoacan and Agaric are all proper for redreſſing the diſorders of acid Lymph, and diſſolving it. But the firſt Gripes a little and Purges much ; the ſecond and third are much weaker ; and the Laſt cauſes Reachings and attempts to Vomit, tho' at the ſame time its Operation is inconfiderable. Gum Ammoniac, Sagapenum and Turpentin attenuat, open and mundify. But the two former Purge a little ; and the third paſſes moſtly by Urine. Jalap and Scammony are two Roſinous Medicines. But the firſt is more turn'd upon the Seroſities of the Blood ; while the ſecond having a Colleſtive Roſin is given to griping. Manna, the Juice of Flower-deluce, Elder-barks, and Buckthorn, do all Purge Seroſities. But Manna ſweetly performs its Office without incommoding the Breſt ; Flower-deluce melts down the Blood ; Elder-barks have the ſame quality and beſides cauſe vomitings ; Buckthorn is apt to heat, &c.

If we turn to the Mineral Purges, we'll find 'em in the like Condition. Cream of Tartar reſembles Tamarinds ; the *Vegetable Salt* is a Saline Body that do's not congeal as the other ; Antimonial Purgatives melt down the Humors and ſqueeſe the parts with force ; ſweet Mercury corrects the viſcoſity and acidity of the Lymph, and melts it down, but do's not ſqueeſe ſo hard : the Cryſtals of Silver both melt down, ſqueeſe, and corrode ; their Vertue reſembles that of the *Hydragoga*, ſuch as *Gutta Gamba*, *Elaterium*, Buckthorn, &c.

A LIST of Purgative Med'cines.

Roots.

Jalap in Substance from twelve to thirty Grains. In Infusion twice as much.

Turbitb in Substance from one to two Scruples. In Infusion thrice as much.

Mecboacan in Substance from a Scruple to a Dram. In Infusion thrice as much.

Rhubarb in substance from half a Dram to a whole one. In Infusion thrice as much.

Hermodactyls in Substance from half a Dram to a whole one. In Infusion thrice as much.

Briony in Substance from a Scruple to a Dram. In a Decoction twice as much.

Barks.

Elder-barks in Infusion from two to four Drams.

Black Elder-barks in Infusion from half a Dram to a Dram and a half.

Leaves.

Soldanella in Substance from a Scruple to a Dram.

Senna in Infusion from a Dram to half an Ounce.

The Cods of Bastard Senna twice as much.

Violets in a Decoction a handful.

Hedge-hyssop in Powder from one to two Scruples. In Infusion to three Drams.

The Herb Mercury by way of Decoction a handful.

Flowers.

Peach Flowers in Broth half a handful.

Pale Roses in a Decoction half a handful.

Violets in Decoctions a handful.

Juices.

Manna in Broth from one to three Ounces.

Aloes in Pills from half a Scruple to two Scruples.

Scammony from five to fifteen Grains.

N

Gums.

Gums.

Ammoniac to a Dram.

Sagapenum to a Dram.

Turpentin to two or three Drams.

Fruits.

The Pulp of Cassia in Substance to an Ounce. *Boyl'd*
with the Seeds in Water to three Ounces.

Tamarinds to an Ounce.

Myrobalans the same Dose as *Rhubarb*.

Seeds.

Of Dwarf-Elder,

Violets,

Fleawort,

Bastard Saffron,

}

From a Dram to two Drams,
by way of Emulsion.

Minerals.

Azure-stone pounded and wash'd, from a Scruple to a Dram in Substance.

The Armenian Stone pounded and wash'd, from a Scruple to a Dram in Substance.

Chymical Purging Med'cines.

Resin of Scammony from six to twelve Grains.

Resin of Jalap from six to twelve Grains.

Extract of Rhubarb from ten Grains to two Scruples.

Extract of Aloes from fifteen Grains to a Dram.

Laxative Mineral from fifteen Grains to half a Dram.

Sweet Sublimate from six Grains to thirty.

Red Precipitat from four to ten Grains.

Extract of Senna from one to two Scruples.

Fix'd Flowers of Antimony from two to five Grains.

Extract of Hedge-Hyssop from fifteen Grains to two Scruples.

Crytals of Silver from two to four Grains.

The vegetable Salt,

Sal Polychrestum,

Antimonial Nitre,

}

From a Dram to half an Ounce.

The

The FORMS of Purging Recipe's.

As touching the Forms of Purging Med'cines, some are kept ready made in the Shops; and others are only prescrib'd as Occasion serves.

Those which are prescrib'd *ex tempore* are either to be taken in at the Mouth, or put in at the Fundament, or apply'd by way of Fomentation. Fomentations are scarce us'd, and therefore I shall spare the Pains of giving such Examples. Those receiv'd at the Fundament serve to evacuat the Humors that nestle in the Guts, and are either liquid or solid.

Those of a liquid Form are call'd Clysters. They are made use of, when we desire only to clean the great Guts without disturbing the Blood; or when the great Guts are gall'd or ulcerated, and need to be mundify'd.

The Forms of those taken in at the Mouth, are either solid or liquid. In Hydropical Cases we prefer the former sort, for fear of augmenting the Serosities; at least we are cautious of giving large Quantities of Liquor. But in Hypochondriacal Cases we prefer the liquid Forms, and those of the largest Quantity, because they dilute the Acid Salts, and in evacuating the Serosities do not thicken the Blood. In both Cases the Purgatives must be strong because the Humors are thick, and the Acids, with which the Blood then abounds, may thwart and lessen the purging Force.

An Emollient and Laxative Clyster.

Take of the Leaves of Mallows, Marsh-mallows and Pellitory of the Wall, of each a Handful. Boyl 'em in a Quart of Water. Strain out the Decoction, and dissolve in a Pint of it four Ounces of Honey. If ye desire to make the Clyster stronger, ye may boyl in the Decoction half an Ounce of Senna, then strain it, and add the Honey.

A strong Clyster to be Injected in Sleepy Diseases.

Take an Ounce of Senna, boyl it in three half pints of Water, till the half be wasted. Strain out the Liquor thro' a Linnen Cloth, and add three Ounces of Emetic Wine, and an Ounce of the Hiera of Coloquintida.

A Softening Clyster to be us'd in a Tenefmus or Dysentery.

Take three Handfuls of the Leaves of Tapsus Barbatum. Boyl'em in a quart of Water till the half be wasted. Strain out the Liquor thro' a Linnen Cloth, and dissolve in it an Ounce of red Sugar, and as much of the Honey of Roses.

A Clyster to be us'd in the Collic.

Take a Pint of Wire, and warm it; then dissolve in it an Ounce or two of Benedictum Laxativum.

Sometimes it falls out, that the Clyster injected is not thrown out again. In which Case we make use of Suppositories made up of Hony boyl'd and mix'd with Salt or Sal Gem to a solid Consistence, of the Bigness of one's Finger, and Length of half a Foot

As for the Forms of Purges to be taken in at the Mouth, they are either Ptisans, Apozemes, Potions, Bolus's, Powders, Pills, Troches, Electuaries or Sy-rups.

A Purging Conserve of Violets.

Take a convenient Quantity of Manna, sprinkle it with the fresh Juice of Violets, let the Manna dry, and then sprinkle it again, repeating the same Method till the Manna will imbibe no more of the Juice. Then let it dry well in the Sun in a Glass Vessel. This Conserve purges very well from two to six Drams.

Syrup

Syrup of the Herb Mercury.

Take a Pint of the Juice of Mercury, well depurated, add to it twelve Ounces of Sugar; and boyl all to the Consistence of a Syrup. When ye take it off the Fire; add half an Ounce of the Tincture of Cinnamon. We may give one or two Ounces of this Syrup in any purging Ptisan.

Syrup of Buckthorn, for Hydropical Persons.

Take six Pound of the Juice of Buckthorn Berries, boyl it gently with four Pound of Sugar. And towards the end, half an Ounce of Oyl of Tartar per Deliquium. It purges well from half an Ounce to an Ounce and a half.

'Tis needless to transcribe all the Pills and Electuaries that Dispensatories are cram'd with. Many of 'em want to be amended and exchang'd. However, since the Business of a Dispensatory is foreign to my present Design, I shall content my self with a few Examples for the Form's sake.

Purgative Limonade.

Take a Pint of Water, and slice a Citron into it; then add half an Ounce of Senna; let all stand in some cold Place for twenty four Hours. Then strain and wring out the Liquor, and dissolve in it two Ounces of Manna. Then strain it again, and make two Draughts, the one to be taken two Hours after the other.

Mercurial Pills.

Take of Gummy Turbith, Hermodactyls, Mechoacan, and Rhubarb, of each two Drams; sweet Mercury and Scammony, of each three drams; Troches Albandal, a Dram; pulverize all together, and incorporate 'em with Turpentine dissolv'd with its own Oyl. Beat all together to the Consistence of Pills. Dose from a Scruple to two, sometimes a Dram.

Poterius his Universal Pill for Head-aches,
Asthma's, Epilepsie, Gout, &c.

Take half an Ounce of Aloes, two Drams of Myrrh, a Dram of Mastick, half a Dram of Saffron, and a Dram of the Flowers of Antimony, pound all together, and incorporate 'em with a sufficient quantity of the Syrup of Pale Roses. These Pills purge from Fifteen Grains to a Scruple. The Gums binder the Emetic Force of the Antimony.

An Universal Electuary for the Gout, Rheumatism, &c.

Take of Hermodactyls, Gummy Turbith, and Mechoacan, of each two Drams; Jalap, Scammony (whole,) Violet-seeds pulveriz'd and Mace, of each a Dram and a half. Incorporate all with four Ounces of the Syrup of Juniper; adding towards the end a Dram of Oyl of Tartar, and half a Dram of the Essential Oyl of Anis. This Electuary is given from one to three Drams.

A Purging Electuary of Roses.

Take a Pound and a half of the Juice of pale Roses: Boil it with an equal quantity of Sugar, adding towards the end ten Drams of Scammony, and half an Ounce of the Salt of Tartar. This Electuary purges very well from two Drams to half an Ounce.

A Purging Pectoral Electuary.

Take half a Pound of the Pulp or Honey of Raisins clarify'd, incorporate it with Scammony, Agaric, Turbith, Hermodactyls, Violet-flowers and Roses, in Powder, of each two Drams; Senna pulveriz'd, fix'd Salt of Tartar, and Oyl of Nutmegs, of each three Drams; incorporate the whole, and boyl it up to the Consistence of an Electuary. We may give it from two to six Drams, when we desire to purge Persons liable to Coughs, or other Disorders in the Breast.

A Purging Julep.

Take a Dram of Turbith pulveriz'd, two Drams of Hermodactyls, and half a Dram of the fix'd Salt of Tartar. Boyl all in a Pound of Water till the half be wasted: Strain out the Liquor, and add an Ounce of the Syrup of Peach-flowers.

Purging and Aperitive Pills.

Take an Ounce of Sagapenum dissolv'd in the Juice of Elecampane, half an Ounce of the Tincture of Steel; of Scammony, Gum Ammoniac, and Gummy Turbith, of each two Drams; with a sufficient quantity of the Balsam of Peru; make Pills to be given from half a Dram to a Dram.

Purging Pills for a Dysentery.

Take of the Purging Juice of Roses an Ounce, two Drams of the Juice of Quinces, Venice Turpentine half an Ounce; set 'em upon the Fire; and add, by degrees, a Dram and a half of the Extract of Rhubarb, two Drams of Citron Myrobalans reduc'd to Powder. When the Mass begins to come to a Consistence, take it off the Fire, and add to it a Dram and a half of Sweet Mercury. Then make Pills, Dose a Dram.

Purgative Salts.

Take two Ounces of Antimonial Nitre, an Ounce of Tartar vitriolated, and half an Ounce of the Vitriol of Steel. Dissolve all in two Pound of common Water. Then Evaporate the Water and you have a Purging aperitive Salt, to be given from one to three Drams, or rather mix'd with some Purging Syrup or Ptisane.

A Laxative Ptisane.

If ye design to make a Palatable Laxative Ptisane, ye must not add Senna, because its aukward Taste gets the ascendant of all the Ingredients ye can put in,

Take of Jalap, and Merboacan, of each a Dram; Infuse 'em all Night upon ashes in a Pint of Water. Then add a Dozen of soure Prunes.

If ye desire to make it stronger, leave out the Prunes, and put in two Drams of the Vegetable Salt. But then the Piisane will not be quite so pleasant. Thus ye have four Glassfuls: Of which let the Patient take two every Morning.

Purging Tinctures.

Take half an Ounce of Jalap, and as much black Hellebor in Powder; pour upon 'em a Pint of Brandy. Let 'em Digest for twenty four Hours; then add Gutta Gamba and Elaterium, of each a Dram; let 'em Digest again for two Days, the Glass being shak'd now and then. When 'tis clear ye may give a Spoonful. 'Tis very serviceable to Hypopical Persons. If ye please ye may drink a Glass of Wine above it.

A Purge for the Declension of continual Fevers; which may likewise be given in Intermitting Fevers.

Take six Grains of Scammony and as much of the Rosin of Jalap. Incorporat both the one and the other in Honey to the bigness of a Filbeard; and then dissolve all in a Glass of Limonade.

A Purge for Phthical Persons.

Take an Ounce and a half of Manna. Dissolve it in a Glass of some Pectoral Piisane. If the Patient be not easily wrought upon, ye may add three Grains of Scammony.

A Purging Potion for Hydropical and Hypochondriacal Persons. or such as are troubled with Obstructions in the Nerves.

Take twelve Grains of the Rosin of Jalap: Dissolve 'em in a Spoonful of the Oyl of Sweet Almonds. Then mix the Solution in a Glass of some aperient Piisane.

Purging

Purging Troches, to be us'd in Claps, Shankers, or any Venereal Disease; and in the Scurvy.

Take a Dram of Scammony, and as much of the Panacea of Mercury; half a Dram of the Resin of Jalap; a Dram and a half of Soluble Chalybeat Tartar, with Gum Tragacanth dissolv'd make Troches. Dose from twenty to thirty Grains.

A Purging Bolus.

Take two Drams of Turpentine, two Scruples of Rhubarb in Powder, fifteen Grains of Jalap. Incorporate 'em together, and make a Bolus to be us'd in a difficulty of making Water.

Another Bolus.

Take half an Ounce of the Pulp of Cassia, half a Dram of the Vegetable Salt, eight Grains of Scammony. Incorporate 'em together. And make a Bolus to be divided into several Potions, and swallow'd in Wafers.

The Powder Cornachini.

Take two Drams of unbruis'd Scammony; Diaphoretic Antimony and Cream of Tartar, of each a Dram: Mix all together. And make a Powder to be mix'd with some Elettuary, or exhibited in White Wine from fifteen Grains to half a Dram; if ye give it in hot Broth or Pissane, ye must first mix the Powder with the Yolk of an Egg, or the Juice of Liquorice. Else the Scammony will not incorporate.

A Purging Extract of Aloes.

Dissolve Aloes in fair Water, pour off the Solution, leaving the Dregs at bottom. Then Evaporate the Liquor very softly to the Consistence of an Extract. Dose to half a Dram. Other Purging Extracts are genenerally Prepar'd by Infusion or Decoction, especially when the Medicine do's not readily give a Tincture. But that of Gutta Gamba may be
made

made just as the Extract of Aloes. To my Fancy, the addition of the Oyl of Tartar would do no harm to neither.

Extract of Gutta Gamba.

Take two Drams of Gutta Gamba in Powder, dissolve it in a Pound of Water, then add two Drams of the Oyl of Tartar per Deliquium, strain out the Liquor and evaporat. 'Tis given in any convenient Vehicle from six to twelve Grains.

Another Purging Extract.

Take two Drams of Jalap, a Dram of Gummy Turbith, and a Dram and an half of Rhubarb. Reduce 'em to Powder, then pour upon 'em a Pint of White-wine, and add three Drams of Senna. Stop the Vessel close, and let it stand in some hot Place for twenty four Hours. Then add a Dram and a half of the Oyl of Tartar per Deliquium: Strain out the Liquor and evaporate softly to the Consistence of an Extract. 'Tis a very gentle Purge. Dose, from fifteen to thirty Grains.

Purging Broth.

Take a Handful of Violet Flowers, half a Handful of pale Roses, and a Pugil of Peach Flowers. Boyl 'em together with a Pullet in fair Water.

Another.

Take two Drams of Senna, a Handful of Chervil, and an Ounce of Manna. Mix all in Veal Broth till the Manna be dissolv'd.

A Purging Decoction.

Take a Dram of Jalap in Powder, a Dram of the vegetable Salt, and half an Ounce of Manna. Boyl 'em in half a Pint of Water, till the half be wasted,

Another Decoction.

Take an Ounce of Tamarinds, and two Quinces of Cassia
with

with the seeds, boyl 'em in a Pint of Whey, and strain it out thro' a Linnen Cloth. 'Twill purge gently.

A Purging Ointment.

We may likewise loosen the Belly by applying to the Navel two or three Drams of Scammony with the Oyl of Colocynthis. But we must take Care, that the Sharpness of the Medicine does not gall the Skin. Besides, the Operation is very uncertain.

CHAP. IV.

Of Remedies proper for stopping an Over-purgation.

NOTwithstanding all the Precaution imaginable, 'twill sometimes fall out, that the Purging Medicine works too violently. Sharp Humors in the Body joyning in with those of the Purgative will gall and irritat the parts to an unsufferable degree.

Sometimes the unseasonable timing of the Purgation will occasion the excess. For Instance. If a Purge be exhibited during the time of some Critical Motion. And sometimes the natural violence of the Medicine will of it self melt down the Blood, and cause an Over-purgation.

To avoid such dangerous Accidents our modern Physicians have chose to depart from the Measures of the Ancients, who us'd very Poysonous Purgatives, Thus Rats-bane, Mezereon, Verdigris, Sandarac, white Hellebor, &c. are now in disuse; as being poysonous, and only fit for external use, in Cauteries: For their keen Particles gnaw and unrip the texture of the Parts.

Sometimes to prevent the inconvenience of a violent Purge, we are wont to put the Medicine into a fluid Form,

Form, and joyn to it some Aperitive; that so the Glutinous parts in the Guts being dissolv'd, the Purgation may succeed with less Pain and Trouble.

At other times tho' we know there are glutinous and sharp Humors in the Guts, yet we are constrain'd presently to exhibit Purgatives: a Colic is an Instance. In that case we bleed the sharp purgatives with Narcotics; or if the relenting of the Pain allow a naked Purge without the additon of Narcotics, then we exhibit a fortifying potion after it has done working, to retrieve the repose and calmness of the Blood. For example. *Take two Ounces of Baum Water, and as much Borrage Water, mix 'em with an Ounce of the Syrup of white Poppies, and half a spoonful of Cinnamon Water.*

These Paregoric Draughts have volatil Parts which fortify the Body, and besides they emprison the Spirits and allay the tumult of the Blood. Accordingly, when we give 'em after Purgations, we seldom see any such Irregular Motions as cause an over-purgation.

But when all Stratagems are defeat, and that Gripings and purgings will still revive and continue beyond their due time, in that case we are wont to inject Clysters of a pint of Milk and a quarter of a pound of red Sugar.

At the same time we administer at the Mouth hot Milk, fat Broth, Oyl of sweet Almonds, and other softning Ingredients, especially if the Gripes be very violent: For then we must by all means endeavour to qualifie and soften the keen corrosive parts of the Medicine which occasion the Gripes. Now Milk and Oyl are admirably suited to these Indications. Their Oily balmy parts temper soften, and cover the keen Particles; and by arming the Guts, animate 'em to make a vigorous Defence against their Assaults.

We apply also outwardly to the Stomac the Oyl of Nutmegs, or a plaister of Venice Treacle. And continue still to exhibit inwardly the volatil Pacificks, such as Laudanum dissolv'd in Cinnamon-water, and Venice Treacle mix'd with Absorbents, I mean such Ingredients as mollifie and imbibe the sharp Particles; namely, Coral, Crabs-Eyes, Salt of Tartar, and even Quinces;

Quinces; for tho' they are in some measure acid, yet their tough clammy parts are of use to clog and fetter those which range too nimbly through the Body.

Sometimes we meet with Fluxes, like to Over-purgations, tho' there was no Purgative in the Case: Such are Loosenesses, *Lienteria's* or Dysenteries. The Remedies proper in such Cases are much the same as those for over-purgations. However, when I come up to the Astringents, I shall have leisure to insist further upon this Subject.

I shall only add; that in Loosenesses and Overpurgations Sudorifics are very serviceable. Because they not only imbibe and turn the edges of the Corrosive Ferments, but likewise divert the Serosities and set off the course of the Humors another way. For the same Reason Emetics and sometimes Diuretics are of Sovereign use in some Loosenesses. In a Dysentery *Ipecacuana* is an Instance. But I cannot entitle 'em to the same privilege, in the case of an Over-purgation.

'Tis further to be taken notice of, that an Over-purgation must not always be stop'd. Nay on the contrary in most cases an early suppression may be hurtful. In a Word, an Over-purgation must be treated just like the *Cholera Morbus*; that is, we must temper, soften, pacify, and fortify; but not stop it while it evacuates corrupt Humors, especially if the patient's strength be able to hold out. If the Reader please he may Consult the Chapter of *Cholera morbus* in my Treatise of acute Diseases.

A

A LIST of the Medicines that cure an Over-Purgation.

Softening and Healing Ingredients.

Pullet Water,	}	To be exhibited frequently.
Broth,		
Pacifying and cooling Ptisanes,		
Milk,		
Oyl of sweet Almonds,		

Abforbents.

Diaphoretic Mineral from a Scruple to a Dram.	}	From one to two Scruples in any Liquor.
Seal'd Earth,		
Sole Armoniac,		
Chalk,		
Prepar'd Crystal,		
Bezoar Mineral from a Scruple to a Dram.		
Coral in Powder from a Scruple to a Dram, to be exhibited in any Liquor.		
Crabs Eyes from a Scruple to a Dram.		
Salt of Tartar from ten Grains to thirty.		

Fortifying Ingredients.

The Powder of Vipers from ten to thirty Grains.	}	From one to six Ounces.
Venice Treacle from a Scruple to a Dram.		
Cinnamon Water from half a Spoonful to a Spoonful.		
Scabious Water,		
Mint Water,		
Carduus Benedictus Water,	}	From one to two Scruples.
Meadow sweet Water,		
Extract of Juniper,		
Wormwood,		
Carduus Benedictus,		
Tormentil,		

Volatil

Volatil Salts from five to fifteen Grains.

Oyl of Anniseed from five to fifteen Drops.

Ambergrease from half a Grain to two Grains.

Confection of Jacinth and Alkermes from half a Dram to a Dram.

Narcotics.

Laudanum Cydoniatum from one Grain to three.

Astringents.

Gelly of Quinces a spoonful.

Plantan Water from two to four Ounces.

Sugar of Lead from one to six Grains.

Their FORMS.

A Potion for an Overpurgation.

Take of the Confection of Jacinth, a Dram, of liquid Laudanum six Drops, Carduus Benedictus Water and Bugloss Water, of each two Ounces, Cinnamon Water a spoonful. With an Ounce of Syrup of Quinces make a Potion.

Another.

Take a Dram of prepar'd Crystal, a Dram of Bezoar Mineral, a Dram of the Confection of Jacinth, dissolve all with an Ounce of the Syrup of Cinnamon, four Ounces of Mint-water, and two Ounces of the Water of Carduus Benedictus. Mix all together, and give a spoonful now and then.

A Cataplasim.

Take half a Pound of Bread beaten small, besprinkle it with an Ounce of Alicant Wine, two Drams of the Tincture of Cinnamon, and as much of the Tincture of Saffron. Mix and apply it to the Stomac.

A Bolus.

Take a Dram of Bezoar Mineral, half a Dram of the Powder of Vipers; Saffron, Cinnamon, and Camphyr, of each a Scruple; with a sufficient Quantity of the Syrup of Cinnamon make a Bolus. Dose, half a Dram.

A Clyster.

Take a Dram of Cinnamon, and half a Dram of Saffron, boyl 'em in a Pint of Water with a handful of Sage. Then strain the Decoction, and dissolve in it an Ounce of the Syrup of Quinces.

A Powder.

Take a Dram of prepar'd Crystal, and as much prepar'd Crabs Eyes, with half a Dram of Powder of Vipers. Mix. Dose, half a Dram in any convenient Vehicle.

C H A P. V.

Of Diureticks.

IN Order to know how some Medicines provoke *How Urine* Urine, and what use they are of, we are to *is separa-* consider that the Urine is only a Serous part of the *ted.* Blood; separated in the Kidneys and convey'd thro the Ureters to the Bladder, and from thence to the Urethra:

The same Serous Humour filtrated through the *The disse-* Glandules of the Skin, is call'd *Sweat.* So that *rence be-* Sweat and Urine have the same Original, and dif- *tween* fer but little from one another. *Sweat and Urine.*

The Serosity of the Blood takes rise from the Watry and Liquid parts of our Victuals and Drink; and serves for a Vehicle to convey proper Nourishment to the Chinks and remote Corners of the Solid parts: It perfectly dissolves the Saline Bodies it meets with, and by their means unites with the Sulphureous Particles. In fine it carries off such parts of the Blood as are not proper for Nourishment, and squeezeng it self thro the Kidneys or Glandules of the Skin, frees the Blood of an useless, and sometimes troublesome burthen. *The origi- nal of U- rine.*

This Serosity must still have fresh Recruits. Be- *The use of* cause the First Floods being already laden with Salt *Drink,* and Sulphur cannot find Room for more. And therefore a new supply must come to Relieve it, and convey the Nourishment to the Parts. Now, 'tis Drink that brings this supply.

Sometimes this Serous humor, or Urine, do's *The causes* not part from the Blood as it ought to do; either *of a diffi-* because 'tis too closely united with it, or because *culty of* the Urinary Passages are imbarass'd, or because the *Urine.* Motion of the Blood is so Rapid, that the Serum cannot hit the Pipes of the Kidneys,

The inconveniencies of a suppression of Urine.

The Suppression of this Evacuation occasions a Redundancy of Serum: from whence Dropsies, Scurvey, Catarrhs, Defluxions, Continual and Intermitting Fevers, Phthisics and Asthma's may take their Rise. But 'tis a material point, to distinguish the Causes that hinder this Evacuation of Urine. For that which Removes one Cause, and so proves Diuretick, may strengthen another, and so put a stop to the Evacuation. In Earnest, this is a perplex'd Case. We may say, *Experimentum periculosum, judicium difficile*. For all the Diureticks are of Contrary sets. Some are simply Watry; some are Volatil Salts, such as that of Hartshorn, and the Spirit of Sal Armoniac. Some are Soure and Acid, Witness the Acid Spirits of Vitriol and Sulphur. Some are fix'd Salts, for Instance, the Salt of Tartar; Some are mix'd Salts, as the *Vegetable Salt*. Some are a Medley of Volatil Salts, fix'd Salts and Sulphur; of this Cut are, Turpentine, Wood-lice and Smalage Seed. And some again have no right to any of these principles, for Example, the Shells of Fishes, and films of Nuts. Now to push the matter a little further, let's Consider how these jarring Ingredients perform their Offices upon the Different Occasions.

In the First place, 'tis impossible to discern how these Remedies Influence our Bodies, so as to provoke Urine, unless we understand how the Urine is separated in a Natural State. For that matter the Reader may Consult my Anatomy. 'Tis not a proper Subject in this place. However, I shall briefly Run through the Causes that occasion larger Evacuations of Urine than Ordinary.

The Causes of plenty of Urine.

The Urine is more plentiful than Ordinary, when the Vessels are full of Serous Humours, or when the Blood Circulates somewhat quickly. For then the Serum offers it self more frequently to the Sieve of the Kidneys, and accordingly larger quantities are strain'd out. Besides, the plenty of Urine may also arise from some obstruction in the Emulgent Veins; if the Arteries pour in a larger Measure than the Veins

Veins are able to carry off, then the Serum is squeez'd up, and thrown upon the surface of the Kidneys, where it sojourns and sollicit for passage. Now in this case there must needs be more Urine strain'd out, than there would be if the Circulation were free. In Short, whenever the Serous part is disengaged from the Fibrous and Sulphureous part, a quicker Evacuation must needs insue.

We must trace out the Causes of the Filtration of the Urine by Conjectural Marks. To give a few the Filtration of the Urine. Instances. Put the case that after a bout of hard Drinking, or after any Disease, or when the Blood is certainly crouded with Serum, If in such circumstances we meet with Clear and Flat Colour'd Urine, we may then probably Conjecture that a Redundancy of Serum has produc'd the Effect. On the other side. Suppose after a Violent Tossing, or in a Fever, or after the use of Hot Sudorific Medicines; Supposing, I say, that in such Cases the Urine becomes Red and highly Tinctur'd with Salts; we may reasonably conclude that the Agitation of the Blood, and its Rapid Motion has occasion'd the separation of so many Salts with the Serum, and so given Rise to the Tincture of the Urine. To be short, suppose a Person upon taking in of Acids, Voids plenty of Urine, and after some time Voids Less than ordinary; we cannot but see that at First, the Acids have Congeal'd the Sulphureous Part of the Blood, and thus the serous part is dismiss'd; but after that is gone, the remaining Moiety being left alone, is more imbarra's'd in the Sulphur of the Blood, and so a scarcity of Urine Insues.

We see therefore, All Diuretics must either enlarge the Serosity of the Blood; or put the Humors into Motion; or Congeal the fibrous Parts, and slacken the Pace of the Humors; or else by the Strength of a Foreign Liquid, wash off the Obstructions of the Emulgent Arteries or Urinary Vessels.

In the First Rank we may place Water, Mineral Waters, and White Wine. 'Tis true the Mineral Waters pass more quickly than Common Water, *Diureticks of the first class.*

by Reason of their Aperitive Salts; and 'tis as true that the Sulphur and Salts in the White Wine augment its Diuretick Force: But after all the Principal and most considerable Quality of 'em all is, that of enlarging the Serosity of the Blood.

To pry more Narrowly into Diuretick Mineral Waters, we are to Consider that some of them are full of Vitriolick Salts; and the greatest part are Tinctur'd with Acids and Particles of Steel. If ye mix 'em with the Powder of Galls, Cypress Nuts, Oak Leaves, Rinds of Pomegranats or Myrobalsans, they'll Contract a Tincture more or less deep according to their Nature. These Powders absorb the Acid, and precipitate the Metal which was Dissolv'd by it, and so give the Tinctures. There are Likewise some Alkaline Waters full of Earth and Salts, much of a piece with *Nitrum Egyptiacum*; these Waters, I say, will also promote Urine. 'Twere both Tedious and Needless to Condescend to the particulars this Subject might Afford. Mr. *Class*, Fellow of the Royal Society, has Treated this Subject very happily. To him I Referr the Reader.

White Wine Injoys a Sulphur, fix'd by an Acid Tartar. Accordingly if we mix with it the Oyl of Tartar *per deliquium*, it assumes a Blackish Yellow Colour, by Vertue of the Exaltation of its Sulphur. It furnishes our Body with Serum, and so enlarges the quantity of Urine; and which is wonderful, the Urine it Causes, Loses its Red Colour upon the Addition of the Oyl of Tartar, and assumes a deep Red when Acids are joyn'd to it. This is just contrary to what we observ'd upon the Wine it self. And may serve as a proof of the huge alteration that Liquors undergo in being mix'd with the ferment in the Stomach, Bile and Blood.

The Second Rank
of Diureticks.

In the Second Rank, we place such as put the Blood into Motion. These have all very Active Principles, but differ hugely among themselves. Turpentine is quite another sort of thing, than Hoglice; Hoglice differ as much from white Onyons, and these again from Cantharides. I shall afterwards Examine

Examine each of these Med'cines apart, in Order to find out the particular Circumstances they're Calculated for. I shall likewise give some Rules for their Compositions, in Order to avoid the Danger of killing one, by the addition of another.

The Spirits of Nitre, Vitriol and all Acids fix *Diureticks* the Blood, and Congeal the Sulphureous Parts; *of the third* they untye and disengage the Serum, and so occa-*fort.* sion its more plentiful Evacuation.

Diureticks are to be us'd when the Mass of Blood *General* is full of Serum, when the Spirits are Drousie, *Rules for* when the Urinary Passages are Stop'd, and in a *the use of* Word, in all Diseases Arising from a prevailing *Diureticks.* Serosity. In Claps we employ them with good Success, because they free the Blood from part of the Salts that taint it.

They are of use in Obstructions of the Liver, Spleen, and Womb; but then the Acid sort must be avoided. Because in promoting the filtration of Urine, they likewise promote Obstructions. And, in Effect, are never proper but in Continual Fevers, where the Sulphur of the Blood is Exalted, and its Rapid Motion hinders the Separation.

Some may say that in Ordering Diureticks for *Objection.* Obstructions of the Kidneys, I Cross upon a Maxim in Physick, which forbids to push the Humours upon the Afflicted Part.

I Answer. The Application is faulty. That *Answer.* Maxim can never be brought in upon this point, while the whole Body of Practice is on Our Side. Do not we Purge in Loosenesses, and give Vomits to Cure Vomitings? Do not we endeavour by all means to promote the Separation of the Bile in the Jaundice, and to turn the Blood upon the Womb in a Suppression of the Terms? In like manner we endeavour to push on the Urine to the Kidneys, that the quantity of the Liquor may break through the Stoppage, and clear the Pipes. But then we only prescribe such Diureticks as put the Blood in Motion by Dissolving its Sulphur, I mean the fix'd Alkalies. For Acids, and such as only in-
large

large the quantity of Serum, are oftentimes ineffectual in this Case.

Precaution. In the Gravel Diureticks are not to be long insisted on, because they open the Pores of the Kidneys, and give Fresh Matter Opportunity to form it self into a Gravel.

Indications against Diureticks. In Inflammations of the Urinary Parts, Ulcers of the Kidneys or Bladder, and when the Mass of Blood is too much Dissolv'd; we must then avoid heating Diureticks, that is such as are charg'd with sharp Particles, and put the Blood in Motion.

We are likewise to observe that Diureticks and all other Evacuating Remedies, are forbid during the time of Critical Efforts. But as for Symptomatical Evacuations, they rather Require 'em. One of the mighty Advantages that Accrues by the Watry Diureticks, is this, that they dilute and carry off a great share of the Salts that occasion grievous Distempers.

Other uses of Diureticks. Diureticks are likewise serviceable to Evacuate purulent matter from the Breast or Joynts; to Cure the Jaundice, and part of the Diseases of the Spleen. Nature has Taught us by her own Precedent, that the precipitation of Purulent Matter and Salts by way of Urine has frequently brought Relief. But in the mean time we must avoid Acids. To my Mind, the Alkaline Diureticks whether Volatil, Sulphureous or Fix'd are most proper on such occasions.

A List of Diureticks. The Five Aperient Roots, Namely those of Smalage, Parsley, Asparagus, Fennel, and Butchers Broom; and likewise the lesser Aperient Roots, Namely Quitch Grass, Capers, Eryngo, Madder and Rest-harrow; These I say are all Diuretick, To which we may joyn the Seeds of Gromwel, Saxifrage, the Rind of Caltrop Roots, Winter Cherries, Pellitory of the Wall, All-good Roots, Violets, Ground-Ivy, Chervil, Marsh-mallows, &c. Now all these Plants have Different ways of Operation. Some Operate by Vertue of a Tartar,
not

not unlike that of Wine; others by a Nitrous Salt; and others again by Volatil Salts. Thus, tho they are all Diuretick, and point to the same End, yet they compass it by different Methods. Some are of use to pacify, temper and allay Inflammations, and a sharpness of Urine. Such are Marshmallows, Pellitory of the Wall, Violets, Water Lily-Roots, Garden Night-Shade, Wild Tansy, Cinquefoil, Fil-beards, the Kernels of Cherry-Stones, Sweet Almonds, Winter Cherries, &c.

Others Diureticks are more Violent. They push *Nensusar.* on the Serum forcibly, they heat, melt and Dissolve the Blood, and oftentimes cause sweat. Such are Burdock, Rest-harrow, Chervil, Eryngo, Fennel, &c.

Water Lillies gives a Red Tincture to the Solution of Turnsole; they afford Acid Liquors, some Volatil Concrete Salts, and a great deal of Oyl, by Vertue of which They're Entitled to a softening Quality. Upon this Account the Root is us'd in Pufans against a Clap, heat of Urine, or Amorous Fevers. We make from the Flowers a Syrup, Conserve, &c. This Medicine performs its Diuretick part, by abating the Inflammations and Sharpness that may either suppress or diminish the Flux of Urine.

Marshmallows are much of the same Nature. *Marshmal-*
Their Roots give a Red Tincture to the Solution of *lows.* Turnsole; and their Mucilaginous Juyce makes Iron black. Their Analysis produces a Concrete Volatil Salt in great abundance, a large quantity of Acid Phlegm, some Lixivious Salts, some Oyl, and some Earth. So that by the Composition and Temperature of its Parts, it becomes Mucilaginous and Softning; and not any of its principles has such an Ascendant over the Rest, as to Discover its Separate Qualities. We must not let its Root boyl too long, else 'twill make the Pufan too Glutinous. Its Mueilage made up with Sugar in the form of Lozenges, is an Admirable Remedy against a Cough. Ourwardly we use it upon Emollient Designs.

Wild Tanfy. Wild Tansey is Vulnerary and Diuretick; It contains a Salt that Approaches to the Nature of Tartar; only 'tis Drown'd in Oyl. We may use it in Pusans or Broth with Crabs, for a Sharpness or heat of Urine.

Garden Night-shade. Morel or Garden Night-shade affords a concrete Volatil Salt, with a great deal of stinking Oyl and Earth. Its Fruit cools and abates the heat of Urine. The Leaves applied externally soften, unbend, and pacify the Parts. Their Juyce is good against the Piles; If it be mix'd with the Spirit of Wine Camphoriz'd, it is good against an *Erysipelas*. The Water Distill'd with Winter Cherries, is us'd against a sharpness of Urine, and Internal Inflammations.

Violets. I have Discours'd of Violets elsewhere. I shall only Add that their Seed, Water and Syrup, all mix'd by way of Emulsion, are good against a Difficulty of making Water.

Filberds, Almonds, &c. Nuts, Filbeards, Sweet Almonds, and the Kernels of Cherry-stones, are qualified by Vertue of their Oily Particles to abate the Sharpness of Urine; especially when they're made use of by way of Emulsion. Their Oyl may also be very serviceable to the same purpose.

The four cold Seeds. The four Large Cold Seeds are of the same cut; being largely endow'd with Oyl.

All the Med'cines now Mention'd are not properly Diuretick; 'tis only by mitigating the sharpness of Urine and allaying Inflammations, that they occasion a more plentiful Flux of Urine. So their Diuretick Vertue is in a manner Accidental.

Winter Cherries. Winter Cherries are a Sourish Fruit, inclining to a bitter Taste. They seem to be somewhat Nitrous. However they make the Solution of Turnsole red, and promote Urine. We commonly add 'em to the Diuretick and pacifick Emulsions that are order'd to be taken in a Bath, against the Gravel and Nephritick Colick. Seven or Eight of them infus'd in Wine, are yet more effectual; or we may ferment them

them with New Wine, and so make a Wine of them, that is yet more aperient and useful against the Jaundice, and Obstructions.

Pellitory of the Wall is full of Nitre. It grows *Pellitory.* upon old Walls. Its Analysis presents us with some Acid Phlegm, some Oyl, Urinous Spirits, fix'd Salts and Earth. This temperate mixture of its parts, makes it Softening and Discussive, and of good use outwardly against Inflammations. Its Juice and Decoction provoke Urine. Sometimes this Plant is made use of against Obstructions of the Bowels: We generally add it to Clysters or Cataplasms, especially those for a suppression of Urine.

Burdock partakes of a Salt that's near ally'd to *Burdock.* Nitre: For the leaves thrown upon burning Coals make a sort of Detonation. It likewise possesses a sort of Sal Armoniack, for its Analysis fetches from it a Concrete Volatil Salt, Oyl, &c. 'Tis Vulnerary, Sudorifick, and Diuretick. Its Root may be given by way of Pisan to an Ounce; or in Powder from half a dram to a dram, mixt with white Wine, or any proper Liquor. Its Flowers and Distill'd Water are likewise us'd.

Ground Ivy affords a Urinous Spirit, an Oyl, an Acid Phlegm, an Earth, and a Lixivious Salt. *Ground Ivy.* 'Tis an Excellent Vulnerary, and very serviceable in all Catarrhs and Disorders of the Breast. It evacuates by Urine; and is given by way of Pisan, Syrup, or Extract.

The Burning Nettle has almost nothing of an Acid. *Nettles.* It affords a concrete Volatil Salt, sharp Spirits, an Oyl, Earth, and some Lixivious Salts. By its Analysis we may conclude, 'tis admirably good against Bleedings, caus'd by a Coagulation of the Blood. 'Tis likewise Diuretick and good against the Jaundice or Cachexies. The seed may be added to the Emulsions, and the Distill'd Water may be useful to the same purposes.

Dandelion is a bitter Plant; it affords a Urinous *Dandelion.* Spirit, an Acid Phlegm, an Oyl and an Earth. Its Juice is Diuretick, and good for opening Obstructions

ons in the internal Parts: But 'tis not violent. 'Tis likewise good against Fevers. Its Extract may be given upon the same occasions, from half a Dram to a Dram.

Alliaria. Alliaria yields an Acid Phlegm, a Volatil Salt, Some Oyl, Earth, and Lixivious Salts. It promotes Urine. The Powder is of use for Ulcers. The Seed being richly stor'd with Alkali Salts, is good against Vapors.

Saxifrage. Saxifrage contains some Acid Phlegm, some Urinous Spirits, a little Oyl, and some lixivious Salts. 'Tis a powerful Diuretick. The infusion of its root in white Wine cuts thick Lymph, especially that in the Lungs.

Gromwel. Gromwel affords an Urinous Spirit, with a great deal of Oil and Earth. 'Tis a strong Alkali, and a noble Diuretick. It defeats the Acid Ferments. We may infuse half an Ounce of the Powder of its Seed in a Glass of Wine.

Smallage, and Parsley. Smallage and Parsley afford a Phlegm, Oyl, Urinous Spirits, and a Concrete Volatil Salt. They are somewhat Diuretick. There is no great stress to be laid upon them; However they are Vulnerary and good against Fevers; We make use of their Juices and Extracts, not only against Fevers and Internal Ulcers, but against the Scurvey and Asthma's. There Seeds have the same Vertues.

Elecampane. Elecampane affords a Urinous Spirit, Oyls, and Acid Liquors. The root is Diuretick. It Softens sharp Lymph, distilling upon the Lungs, and at the same time attenuates Viscous matter. Upon these accounts 'tis made use of against Asthma's. We are wont to give it by way of Pisan, or Broth, or infuse it in Wine.

Burnet. Burnet gives a Volatil Salt, an Oyl, an Acid Phlegm, an Earth: 'tis Vulnerary and Diuretick; we may use it in Infusions, Decoctions, &c. Some recommend it against Loosenesses, and the Small Pox. The Ætiology of its Vertues, is legible in its Analysis.

Rest-har-

Rest-harrow contains some Acids, some Oyls, *Rest-harrow* a Salt like Tartar, and by Calcination yields a ^{row} Saline Salt. We are wont to make Diuretick Ptisans of its Root: But I never saw 'em do much good. In a Dropfie 'tis more troublesome than useful, because 'twill not pass unless it be whetted with Tartar or Steel. I choose rather to prescribe the Bark of its Root pulveris'd to be taken in White Wine, from a Scruple to a Dram. If ye dry this Plant, it loses its Glutinous Phlegm. The Distill'd Water is us'd against the Jaundice.

Asparagus is much suspected. 'Tis true it passes by Urine; but it opens its principles and brings 'em into a fermentation, and so may dispose the Urine to Congeal. *Asparagus.*

Butchers Broom comes near to Rest-harrow for *Butchers* its Vertues. Only 'tis a little more aperient. Its *Broom.* Root infus'd in Wine, may be us'd for the King's Evil. Its dry Berries will make a Diuretick Wine.

Eryngo gives a Red Tincture to Turnsole. Its *Eryngo.* Analysis shews a concrete Volatil Salt, an Oyl and some Earth. 'Tis more Alterative than Diuretick. But its Root in Powder passes somewhat by Urine. 'Tis useful in Ptisans against the Jaundice, and Cachexies. But they ought to be whetted with Tartar or Steel. The Root preserv'd is Reckon'd an incentive to Venery.

Capers, and the Bark of the Caper-Tree, contain some Urinous Spirits; some Acid Phlegms, an Oyl, and Lixivious Salts. They promote Urine but faintly. They are much esteem'd against Hypochondriacal Melancholy. Broom is much at one with Capers. Its Oyl is very Discussive. *Capers.*

Fenil abounds in Urinous Spirits, Oyl and Acid *Fenil.* Phlegm. The whole Plant penetrates and attenuates. The Seeds and the Oyl are much admir'd in a Nephritick Colick. They not only dispel the Wind that inflames the pain, but likewise soften the keen ferments with their Oily Parts, and Evacuate the Humours by Urine. This Plant is justly accounted Balmy, Stomachical, and Carminative.

Upon

*The bot
Seeds.*

Upon the same Level we must bring in the Seeds of Anise, Cummin and Carrots. Van Helmont crys up that of Carrots above all, for redressing the disorders of the Kidneys. It may either be mix'd with the Sap of the Birch-Tree, which that Author recommends against the Gravel; or else tun'd up in Working Beer.

Juniper.

The Chymical Analysis of Juniper, produces an Acid Phlegm, a great deal of Oyl, and some Urinous Spirits. 'Tis much of the same Complexion with Turpentine. 'Tis Reckon'd Balmy, Vulnerary, Stomachical, Sudorifick, and good against Fevers, By Fermentation, and Distillation, it yields an Ardent Spirit, an Extract, &c: Wine in which its Tops are infus'd is a good Diuretick, and Corrects the Faulty ferments. The Oyl of the berries, has the same character as Oyl of Turpentine.

From the Rind of Beans we make a Lixivious Salt that's very Diuretick; being given from one to two Scruples.

Turpentine.

Turpentine is a Rosinous Juice, or a Liquid Rosin that flows from the Turpentine Tree, Larch Tree, &c: By its Analysis, it gives an Acid Phlegm, and a great deal of Oyl Laden with Urinous Volatil Salts; upon which Account it ferments so briskly with Oyl of Vitriol. This Rosin may be either given by it self, in Pills, or Bolus's, or Dissolv'd in any Liquor by means of an Oyl, or the yolk of an Egg. It gently promotes Urine, giving it a smell like that of Violets. It corrects the Disorders occasion'd by the foreign ferments in the Urinary Passages. 'Tis an Admirable Vulnerary; of excellent use against the Phthisick; Ulcers of the Lungs, Kidneys, or Bladder; Dysenteries, Clap, &c: It loosens the Belly. 'Tis needless to mention its external use in Balsams, Plaisters, Ointments, &c: We are wont to distill it, and make several preparations from it.

Take a Retort half full with Turpentine, add to it a handful of Tow. Set it upon a Naked fire; and fit a Receiver to it; let the fire at first be slow, and

and 'twill bring over an Acid Spirit, then an Oyl, first clear, afterwards yellow and last Red. Part 'em all as they come over. A Scruple or Half a dram of the Spirit given in Wine or any convenient Vehicle, brings away Urine and Sand. 'Tis of Excellent use against Claps and Nephritick Colicks.

The Clear Oyl is made use of to the same purpose: Only 'tis more Balmy and proper for Internal Ulcers. What remains in the Retort after distillation is call'd *Colophonia*. But the Vertues of all its preparations are accounted for more at large afterwards.

If we pour the clear Oyl of Turpentine upon the *Balsam of Sugar of Lead*, and let it stand in Digestion till it assume a Red Tincture; Then separate the Oyl, and draw off one half in a Retort; the Remainder is the Balsam of Lead. Which is much approv'd for cleansing and healing Ulcers. A few Drops of it may be given inwardly.

Pour Oyl of Turpentine upon the Flowers of *Balsam of Sulphur*; let 'em stand in Digestion upon a fire of *Sulphur*. Sand till the Oyl becomes Red; then separate the clear Liquor from undissolved Sulphur. Thus ye have the Balsam of Sulphur, which may be given to a Scruple in any Liquor, for curing of Internal Ulcers. I pass over the Balsam of Peru, and Balsam Capivi, because their Diuretick Vertue is much the same with that of Turpentine.

The Analysis of the Ash produces some Urinous Spirits, an Oyl, an Acid Phlegm, and a Caustick Lixivious Salt. The Decoction of its Leaves, is entitled to a Diuretick and Sudorifick Verrue. The rind of the Root promotes Urine. 'Tis good against Dropsies and Fevers. 'Tis given in Powder from half a Dram to a Dram, and by way of Infusion in Wine to a double quantity. The Smoak of the Wood receiv'd at the Ear, is said to cure a Deafness. *Ash tree.*

Madder has almost the same Vertue as Rest-Harrow. *Madder.* Quitch grass Roots boyld in a Pilsan are gently Diuretick. The

*Films of
Walnuts.*

The Films of Walnuts contain a powerful Alkali, which disengages the Sulphureous particles of the Blood, sets 'em in motion, and promotes Urine. Thus twelve of 'em Pulveriz'd are reckon'd an Excellent Remedy.

The Water of Walnuts. Take the Green Nuts when they begin first to appear; bruise them and mix them with Water, then Distill a Water from them; pour this Distill'd Water upon fresh Green Nuts, of a pretty handsome bigness, they being bruis'd, and distill a second time. Then pour this second Water upon Green Nuts almost ripe; bruised; and distill once more. Then Extract the fix'd Salt from the Remainder, and mix it with the Distill'd Water. This Water promotes Urine by putting the Blood in Motion, being given from two to three Ounces.

*The Juice
of Rapes.*

The Juice of Rapes causes Urine in putting the Blood in Motion by Vertue of its Volatil Salts. Mix it with Spanish Wine or Brandy, and 'twill work the better. A Spoonful of the Juice mix'd with half a glass of these Liquors, is a very successful Med'cine.

*The Juice
of Chervil.*

The Juice of Chervil taken by it self, or mix'd with White Wine, is a good Diuretick. We give it commonly to two Ounces in White Wine against the Dropsy. Thus it empties the Serum by the way of Urine.

*Juice of
Birches.*

The Sap of the Birch-tree, or rather the Water, that flows from its branches as they're cut, is a good Diuretick. *Van Helmont* cries it up against the Gravel.

*Preparati-
ons of Tar-
tar.*

Before I take leave of the Vegetable Diureticks, 'twill be requisite to touch upon Tartar, in which their principal Vertue is lodg'd. I have already Treated that Subject at large, and shall only point at its Diuretick preparations. Such are the Cream of Tartar, its Fix'd Salt, the *Vegetable Salt*, Tartar Tartaris'd, Steele'd Tartar, *Tartarum foliatum*, Tartar Vitriolated, Tartar impregnated with Allum, the Urinous Spirit of Tartar, its Volatil Salt, its Tincture. &c: I'll only add that its fix'd Salts calcin'd

*Reclified
Oyl of Tar-
tar.*

cin'd with Lime or Iron become Caustick; its black Oyl Distill'd with Burnt Hartshorn, gives a golden Oyl, Void of the stinking smell; of which a few drops being given in any convenient Vehicle, are of excellent use for promoting both Sweat and Urine, especially in Colick, Hysterick fits, Vapors, &c. Whereas the stinking Oyl is appropriated for external uses, viz. Dissolving clotted blood, discussing, Healing, &c.

Having dispatch'd the Vegetable Diureticks, we come now up to the Animal and Mineral Tribe.

In the Mineral Rank we reckon Nitre, Sea-Salt, Allum, Vitriol, Natrum, Amber, &c.

Salt Petre is a Salt taken by a Lixivium from *Salt Petre*. Earths and Ancient Walls. It contains a Volatil Salt much like to Sal Armoniack; nay sometimes, I believe, Sal Armoniack is mingled with it. It contains also a fix'd Salt like Sea-Salt or Sal Gem, which we take off in purifying it.

Salt Petre is refin'd or purify'd thus. We dissolve *Purified* it in fair Water, then strain out and evaporate the *Nitre*. Liquor till it be cover'd with a sort of a Skin. Then we set the Vessel in some cold Place, where the Liquor forms it self into Crytals. If we Remove the first Crytals, and pursue the evaporation and Crytallising further, we'll find at last a Sal Gem or a Salt not unlike Sea-Salt.

Purified Nitre is a good Diuretick. If we melt it in a Crucible, and add to it a little Brimstone in Powder, and then put all into a hot Bras Basins, and stir the basin so as to spread the Nitre over it; it becomes Crystal Mineral or Sal Prunel, which differs not from purified Nitre, but only in the fixation of its parts, by the Acid of the Sulphur. For which Reason, I prefer the purified Nitre. Which gently promotes Urine, by making the Blood more fluid. For if we mix the Solution of Nitre with Blood, 'twill hinder its Coagulation. Both these Med'cines are useful to quench Thirst, because they fix the exalted Sulphur of the Blood and Choler, and by Vertue of irregular parts, Cramp their freedom and

and Motion. We need not wonder, that Nitre which is compounded of a Volatil Acid, and a fix'd Alkali, should both dissolve the coarse Sulphur of the Blood, and at the same time fix its Volatil Sulphur, and so prevent irregular fermentations. They are likewise us'd for abating the heat of fevers, softning the sharp Salts in a Clap, and discharging them by Urine. Commonly we add a dram of either to a pint of Pilsan.

Sal Polychrestum.

Take equal parts of Sulphur and Nitre; throw 'em by spoonfuls at a time into a Red hot Crucible. When they are well calcin'd, put all into a Brass basin. When it grows cold, pound it and dissolve it in Water: Then filtrate and evaporate, so ye have the *Sal Polychrestum*, which loosens the Belly and causes Urine. It must be given in large Doses, because the Vertue is lodg'd in gross fix'd particles.

Antimonial Nitre, Nitre fix'd by Lime Water.

Antimonial Nitre is a good Diuretick.

Take Three Pound of refin'd Salt-Petre, mix it with six Pound of Lime Water; evaporate the moisture and dissolve it in warm Water, then filtrate, evaporate and Crystallize; thus ye have *fix'd Nitre*. The first Crystals are the best. 'Tis given from one to two drams, being Aperient, Diuretick and good against Fevers.

Nitre fix'd to an Alkali.

Take melted Salt-Petre, throw into it the Powder of Coals, till the Inflammation and Detonnation cease, then put the remaining powder into Water, and filtrate and evaporate. So ye have a *fix'd Alkaline Nitre*, like to Salt of Tartar. It dissolves in Oyl, passes by Urine, imbibes Acids, &c.

Nitrum foliatum.

Take this Alkaline Nitre, and pour upon it Distill'd Vinegar, proceeding in the same Method with that of *Tartarum Foliatum*. So ye obtain a *Nitrum Foliatum* parallel to it in Dose and Vertues. It causes Urine, and is good against obstructions and Vapors.

Nitre Regenerat.

Take the same Alkaline Nitre, and pour upon it Spirit of Nitre; and so ye have a *Nitrum Regeneratum*, like to purified Nitre, only a little more Subtile.

Take

Take the same Alkalin Nitre, and pour upon it the Spirit of Vitriol: 'Twill produce a Nitre Vitriolated, which is Diuretick and every way parallell to Tartar Vitriolated. This preparation is much the same with *Arcanum Duplicatum*. But I rather choole *Tachenius* his Tartar Vitriolated; 'Tis Made with the Magistery of Vitriol, as above describ'd.

Take Salt-peter and mix it exactly with a triple quantity of Potters Clay. Put all into a Retort and draw off the Phlegm with a slow fire, then lute on the Receiver, and give a Reverberatory fire, and 'twill bring over the Spirit of Nitre, which is a powerful Acid. If it be well deflegmated it always Smoaks. If ye put a few drops into a Glass of Water, it becomes wonderfully Diuretick.

Mix equal quantities of the Spirit of Nitre and Spirit of Wine. They'll ferment together. And the fermentation softens the Spirit of Nitre. Distill 'em; and then ye have the Dulcify'd Spirit of Nitre. Eight or Ten drops in any convenient Vehicle, are an Excellent Diuretick, Carminative and Antihysterical Medicine. Accordingly 'tis very serviceable in the Colick.

Common Salt and Salgem are somewhat Diuretick. And some say Sea Water is good for Hydropical Persons. These Salts are purified just as Nitre. The Crystals which come last are near a kin to common Salt, and very different from the first. Which is the same case as that of Nitre. Moreover, the latter Crystals of Sea-salt are more Acid and less encumber'd by the Sulphureous Earth. Accordingly they congeal Oyl of Tartar, and make a White Curd that does not easily dissolve in Common Water.

Take dry'd Salt, mix it up with Bole Armeniack into a Retort, and draw off the Spirit, which is admirably Diuretick, and good for quenching Thirst, killing Worms, &c. It differs extreamly from Spirit of Nitre: For Metals dissolv'd by the latter, are precipitated by the former. Besides, the one dissolves Gold, and the other does not, In fine, 'tis much short of the

Volatil quality of the Spirit of Nitre : For a great deal of the Salt remains in the Retort together with the Bolus, and so a part of the Acid does not come up. Now Nitre distill'd brings up all its Acid.

*Spirit of
Salt dulci-
fied.*

We Dulcifie the Spirit of Salt in the same manner as that of Nitre, by Distilling it with a double quantity of the Spirit of Wine. Thus it retains the same properties as before, and becomes more proper for Internal uses, being given in a larger Dose.

*Salt re-
viv-
ed.*

If ye pour the Spirit of Salt upon the Salt of Tartar, it produces a regenerated Salt, of the same Nature with common Salt ; that is, which abides unalterable in our Bodies, and comes forth with the Excrements by Stool or Urine, in the same Condition it was in before. This argues that its principles are more compact than those of Nitre and other Salts.

*The opera-
tion of
Acids.*

I've already discours'd of Vitriol and its Preparations. And therefore I shall content my self with acquainting you that its Spirit and Oyl are strong Diureticks. All Acid Spirits have one way of causing Urine ; that is, they congeal the Fibrous part, and give the Serum an Opportunity of escaping. Such also are the Spirits of Sulphur, of Allum, of Honey, of Sugar ; the Juices of Lemmons, Berberies, Verjuice, &c.

'Twere a tedious Task to pursue all the Acid Diureticks through their Minute differences. Besides, I purpose to touch upon them elsewhere. I shall only stay to furnish you with Reasons, why Salt and Nitre will not part with their Spirit unless they be mixt with Earth ; whereas Vitriol and Allum are distill'd upon a bare Calcination ; and Sulphur needs only to be kindled.

Salt and Nitre cannot be Distill'd without their parts be disunited, because they presently melt, and besides are apt to break the Vessel. Vitriol and Allum contain much Earth, and therefore want only to be Calcin'd, that so their Texture may in some measure be open'd, and the moisture which Clouds the Spirits may be evaporated. Sulphur, its Spirit is wrap'd

wrap'd up in Oyly parts, and cannot be otherwise parted from them, than by dispersing them.

I pass over many Preparations might be made of Flints, Chrystal or the Nephritick Stone, whether by Extracting Tinctures or Magisteries with the Spirit of Salt, or by Calcining them with the Tartar of Wine, and then dissolving in a Cellar, or also by impregnating the Spirit of Wine with their Vertues. To my fancy, they are of no great use. However, I shall touch upon them afterwards.

But I cannot avoid insisting a little upon Lime, by reason that it affords many preparations which are Diuretick, and of Sovereign use, for several Disorders of the Kidneys. It seems to contain an Acid Salt, and a strong Alkali.

Mayou argues for its Acidity from the Qualities of the Water in which 'tis slak'd. If ye add to this Water the Salt of Tartar or any other fix'd Alkaline Salt, it become White and makes a *Coagulum*. *Zwelfer* assures us that it fixes and Congeals Volatil Salts to an undissolvable degree; and that the Volatil Spirit of Salarmoniack makes it White. It gives a black Tincture to the Solution of Galls. And the Spirit of Vinegar or Acids clarify it. On the other side. We have sufficient evidence of its strong Alkali. For it retrieves the natural Colour of Turnsol after 'tis alter'd by an Acid; it precipitates the solution of *Sublimatum* as much as Oyl of Tartar. It Dissolves Sulphur like Alkaline Lixives, and makes a Tincture which drops a precipitate upon the addition of an Acid. In fine if ye mix Lime Water with the solution of Sal Armoniac it causes a Urinous Smell, just as if ye had added Oyl of Tartar to it. Now this argues that the Quick-lime imbibes the Acid of the Sal Armoniac, and gives a loose to its Volatil Spirit.

The contrariety of these Salts of Lime is further evident, from the fermentation that arises upon mixing Lime and Water, and the Cream that swims upon the top of the Water after these Salts are dissolv'd. Now this Cream is just like Cream of Tartar, and

that, as we all know, contains Acids, Alkali's and Earth. If instead of Water we pour upon Lime the Rectified Spirit of Wine, or the clear Oyl of Turpentine, they will not ferment, because these Sulphureous Liquors cannot dissolve the Acid of Lime. And this, I take it, is an Evidence, that the Fermentation which insues upon mixing Lime with Water, takes rise from the jarring Salts dissolv'd in the Water, and not from the fiery particles.

Lime affords several Preparations.

Its Lixivious Water.

Take a Limestone and flake it in Water; 'twill make a Lixive that is much esteem'd both for internal and external uses. 'Tis made use of inwardly against spitting of Blood, or Ulcers of the Internal parts. I have us'd it thus a long time, and could never yet see much benefit from it. It blunts the Appetite, and keeps down lower Belchings. It should be taken to a large quantity, as if 'twere a Pissane; otherwise 'twill do nothing because its struggling Salts mortifie one another. Externally 'tis incomparably useful for stopping a Gangrene, Mundifying, and imbibing Acids. If ye mix it with the Oyl of Linseed, ye have an admirable Ointment for Burnings.

Its Cream.

The Cream which comes a top of this Water is very proper to soften the Sharpeness of Cankers, especially if it be mix'd with preparations of Lead.

Its Spirit.

Besprinkle Quicklime with the Spirit of Wine, then Distill it. It gives a sharp Spirit, which is commonly reckon'd Diuretick. A few Drops of it may be exhibited in any proper Vehicle. To my mind the better way is to pour dulcify'd Spirit of Salt upon Quick-Lime; Thus the Spirit dissolves the Salt of the Lime, and by Distillation yields a Urinous Spirit, which is very Diuretick. 'Tis no matter whether this Diuretick vertue comes from the Lime, or from the Spirit of Salt; 'tis certain that 'tis Diuretick.

Calcine

Calcine Lime and white Tartar together. With the Spirit of Wine extract a Tincture from them, which differs little from the Tincture of the Salt of Tartar. *Its Tincture.*

Calcine Lime with an equal quantity of Sal Armoniac, and give a brisk Fire till they melt. Dissolve all in common Water; then filtrate, evaporate the Moisture, and set the remainder in a Cellar, having surrounded it with the whites of Eggs. Thus 'twill dissolve into a Liquor somewhat like the Spirit of Salt, for it dissolves Gold. Probably, the Alkali of the Lime drinks in the acid of the common Salt that's lodg'd in Sal Armoniac. *Its Liquor.*

Next to the Vegetable and Mineral come the Animal Diureticks. The Animal province affords a great many Volatil Salts, which are all in some measure Diuretick. But for so much as their principal Vertue turns upon Sweating, we shall put off the Explication of 'em to another place; where the Analysis of Sal Armoniack and Urine will also come in. *Animal Diureticks.*

Some Animals are of themselves Diureticks, such are Spanish Flies, Beetles, Woodlice, Crabs, Ants, Snails, Toads, &c. to which we may add several parts taken from Animals, viz. Crabs-Eyes, Eggshells, Dung, &c.

Spanish Flies dry'd, will yield by Distillation a Volatil Salt so sharp, that it galls and corrodes the Tongue, when applyed to it; They likewise give a great deal of Oyl which is very sharp, and has an unsufferable Smell; together with a Phlegm charg'd with Volatil Salts and a little Earth. *Cantharides.*

We seldom administer 'em inwardly, because they gall the Stomach, and mixing with the Urine rear the bladder, and cause a pissing of Blood. We have several Instances of Old Lechers, and young high Belly'd Women, that have kill'd themselves by taking Cantharides. The former thinking to oblige the Venereal business, and the other to be rid of their Children.

Notwithstanding the pernicious Consequences that may follow the taking of this Medicine unprepar'd, yet if we take care to qualifie it, it may be given inwardly as a strong Diuretick.

The common way of preparing 'em, is to kill them with the Smoak of Vinegar, and dry them in the Sun. But this is much short of what preparation they want. Some pull off their Wings and Feet; but they cannot tell for what. *Ludovic* makes a Magistery of them, by pouring on them first Spirit of Nitre, and then Oyl of Tartar. But 'tis to be fear'd that such active Vehicles will dissolve the whole texture of the Flies. Therefore I would choose to Infuse 'em in Distill'd Vinegar or some Acid Wine. For thus it becomes like to a Saline Sal Armoniack, and I take it is more agreeable to the Urinary passages.

Bartholin Orders you to put the Cantharides with their feet and wings in infusion. He took it upon *Galen's* word, that these parts contain a Corrective of the sharp Salts lodg'd in the Trunck of the Body. So he tells you a few spoonfuls of this Infusion, are an admirable Remedy against Claps and Suppressions of Urine.

When a Pissing of Blood insues upon taking this Medicine, We exhibit Milk mix'd with the Oyl of Tartar *per deliquium*.

We may venture sometimes to give two or three grains of their Volatil Salt dissolv'd in a Glass of white Wine.

Their Distill'd Oyl mix'd with an equal quantity of Oyl of Cloves, and six times as much of the Oyl of Nutmegs; is good to anoint the Testicles with for a Veneral Impotency: or the Infusion of Cantharides in Common Oyl may serve to the same purpose.

We may likewise infuse the Powder of Spanish Flies with the Spirit of Wine, and Salt of Tartar; and exhibit twelve or fifteen drops in a Glass of white Wine, against the Gravel.

When

When we make Blistering Plasters of their Poudre, we are wont to weaken their force by adding Vinegar and Yest. But I cannot see the necessity of such Caution, since these Plaisters rarely cause any difficulty of Urine; and besides, their removal presently puts an End to any Inconvenience that may happen.

But when I come up to the Chapter of Blistering Med'cines, I shall Discourse at large of their External Vertues.

Wood-lice contain a Nitrous Salt, which becomes more subtile and Volatil in our Bodies. *Woodlice.* The Nitre they possess is chiefly taken from Old Walls, where they generally Resort. By Distillation, they yield likewise a Volatil Salt which is much short of the sharpness of that of Cantharides: They give also a more tolerable Oyl, and a milder Phlegm. By Calcination we get but little Salt from it; but what there is, is Diuretick. And since 'tis so scanty, methinks the Ashes are an ineffectual Med'cine, as being quite abandon'd by all the Active principles. We may bruise a score of 'em in a Glass of Wine, or Water of Winter Cherries; then strain out the Liquor as a Diuretick. We may also squeeze 'em up between two Earthen Vessels, and let 'em Run so for two days, then wash them in white Wine and dry them in an Oven, when its heat begins to be faint; thus we have a Poudre that may be given to one or two Scruples in any Liquor. In the Gravel 'tis given with Success in the Decoction of Red Pease. The Poudre or Infusion now mention'd are also serviceable in an Asthma, in the Gout, and all other diseases proceeding from Acids, as inveterat Ulcers, &c. There are several Instances of Old Ulcers cur'd by the Internal use of Wood-lice. But those that give 'em fix'd with Spirit of Salt or Vitriol, take the wrong method.

River Crabs by Distillation give a Phlegm, *Uri-Crabs.* nous Spirits, a few Oily Volatil Salts, a little stinking Oyl and some dead Earth, which ferments like

Quick lime upon the pouring in of common Water. Hence we see their principal force lyes in a soft Absorbent Alkali, which renders 'em Vulnerary and Diuretick. There are many ways of preparing 'em. We make an Absorbent Pouder from 'em, call'd *pulvis à chelis Cancrorum*: We distill a Water from 'em by bruising them, then Distilling till they be dry, then pouring the distill'd Water upon the same Remainder, and thus cohobating four times. Then we calcine the *Caput-mortuum*, and draw a Lixivious Salt from it, which we mix with the Distill'd Water. This Water is much cry'd up against the Phthick and Stone; Dose from half a spoonful to three spoonfuls. The fix'd Salt taken apart from a scruple to half a dram in any Liquor, is a strong Diuretick.

If we dry the living Crabs in an Oven, they being shut up close in a Pot; we shall have an Excellent Diuretick Pouder; which we give in any Convenient Vehicle, from half a dram to a dram. But the Pouder may be much improv'd by adding a fourth part of Nitre; and then 'tis very serviceable to Hydropical Persons. *Poteries* Recommends it as a Specifick against Abortion. He only gives it in Broth.

Living Crabs bruiz'd and mix'd with white Wine, make an Aperitive Diuretick Med'cine; fit to promote the Flux of the Terms, and prevent Abortion. We may put four Crabs to a Pint of Wine; and give the strain'd Liquor for two Doses.

If we boyl five or six Crabs with Vulnerary Ingredients; or with Meat to make Broth: The Decoction will be good against the Phthick, and Consumption. It checks the Impetuosity of the Blood, and softens the sharp Salts.

The Ashes of Crabs are Recommended against Madness, and Dysenteries.

Externally we employ the Juice of Crabs for Inflammations; and Cataplasms of Bruis'd Crabs for winding inveterat Ulcers.

The

The Med'cines call'd Crabs-Eyes, are Stones *Crabs eyes.* raken from that Creature. In preparing 'em, we bruise them with a little Water upon a Porphyry Stone, and so reduce 'em to small Troches. They have the same Vertues as the Crabs: Only they seem to be more absorbent, but not so Vulnerary and Diuretick, for they have less Salt and Oyl. They pass the Humours by Urine, they make the Blood fluid, and are very effectual against Spit-tings of Blood, Pleurisy, and all other diseases arising from an Acid, such as soure belchings, Inter-mitting Fevers, &c. Their Dose must be somewhat large, and often repeated. We may exhibit 'em in warm Wine, with a little Oyl of Tartar *per deliquium*, thus their Vertue is considerably inforc'd. They are added to Vulnerary Decoctions for dissolving of the Blood. When we desire to make 'em very Diuretick, we mix 'em with a triple quantity of Vinegar. Thus they are transform'd to a bitter Volatil Salt, that turns its force upon the Urine. The Lowest dose is half a dram. If we give them in so small a quantity, we must give 'em the oftner, else they will have no Effect.

Earth-worms, are much of a piece with Wood-*Earth-lice.* Only their Diuretick Vertue is not so mani-*Worms.* fest. But they are as effectual against the Jaundice, and Gout. The Pouder ferments with the Spirit of Salt. In short. They afford the same preparations as Wood-lice. We make an Oyl of 'em by infusion, to anoint the *Pubes* and Kidneys with, in a suppression of Urine. But to my fancy, *Matthioli* his Oyl of Scorpions goes beyond it. The Oyl now mention'd is also serviceable for Ulcers.

Stag-flies are also near a kin to Wood-lice. *Pro-Beetles.* bably 'tis the Nitrous Salts bred in the Earth, that makes them Diuretick. However they partake somewhat of the Nature of Spanish Flies. If ye dry them in the Sun in a Glas bottle close stop'd, the Pouder is a strong Diuretick, fifteen or twenty grains in Wine being the highest dose. 'Tis good against the Gout and Gravel. By Infusion they afford

afford an Oyl, which is us'd in a Difficulty of making Water, and resembles Oyl of Scorpions. If ye boyl Beetles in Oyl of Linseed till they be wasted, ye have an Excellent Medicine against the Internal Piles. When the Straight Gut falls down, if ye put it up, and Screw the Ashes of Crabs upon it, they will prevent its Relapse.

Toads.

Toads abound in Volatil Alkaline Salts and Oyl : they have a Lixivious Salt, but its quantity is very inconsiderable. Some Authors, particularly *Ludovic*, are unwilling to meddle with this Animal. They pretend to remit it to those who push Experiments too far. However, Experience will vouch, that the Powder of dry'd Toads given from ten Grains to half a dram is an admirable Diuretick. Especially considering that it Cures a Dropsie in the Abdomen at three or four Doses ; every Dose being kept at the distance of some days from the time of exhibiting the other. We may give this Powder with Sugar, or in any Liquor, or by way of Electuary, &c. *Morton* cries up Toads calcin'd till they grow black, against the difficulty of making Water that attends the Small-Pox or Malignant Fevers. He gives them from a scruple to half a dram in any Electuary. In earnest, this Powder is not only a Diuretick, but a Sovereign Remedy against the Plague and Malignant Fevers. *Vanhelmont* took a Toad and hang'd it up by the Leg to dry ; then he mix'd what had run from it with the Powder and Virgin Wax. Thus he prepar'd his *Zenection*, which he gives out as a Preservative against all Contagious Diseases. Toads afford very penetrating Volatil Salts, which are very Diuretick from five to six Grains. Perhaps their feeding upon Stag flies makes some addition to their Diuretick force. By Distillation they yield an Oyl which discusses well. Their fix'd Salt promotes Urine. In a Dropsie we mix it with the Volatil. The Decoction of Toads in Oyl is a good Discussive successfully made use of for the Kings-Evil. As for the other extraordinary Vertues that Toads are commonly dignify'd

nify'd withal, Experience must justifie the Plea. Some tell us that Toads applied to the Kidneys will provoke to make Water and Cure a Dropsie; that if ye dry them and hold them in your hand, or hang 'em about your Neck or under the Arm-pits, they'l stanch a Bleeding at Nose, and Bloody Fluxes of the Womb. *Helmont* says, that the Bone of the left Fore-leg, applied against the Tooth will Cure the Tooth-ach. *Hildan* is for the Bone of the right Fore-leg. Now to know the certainty of these Matters, we must consult Experience. They'l need frequent and repeated Experiments to back them. Besides, 'tis worth while to enquire whether fear or the shrinking aversion that a Person may be seiz'd with upon the approach of such a Creature; I say 'tis a material question whether these passions have not some hand in performing the Miracles.

By Distillation Snails yield a Phlegm impregna-*Snails.* red with Vulnerary and Diuretick Volatil Salts. This Phlegm is much like the Distill'd water of Crabs Eyes. If we bruise Shell Snails, and pour upon them Distill'd Vinegar to the height of a Fingers breadth above them, and distill, we shall have a Spirit, which given to a Spoonful in Pelly-rory water is an admirable Remedy against a sup-pression of Urine. Bruis'd Snails outwardly appli-ed are very serviceable against the Piles or any part seiz'd with Gouty pains.

Pigeons Dung pulveris'd provokes Urine. 'Tis *Pidgeons* given from a scruple to a dram in Wine. It is full *Dung.* of Nitre.

Sal Armoniac is a good Diuretick, being given *Sal Armo-* from one to two scruples. Under the Head of *Re-niack.* remedies against Fevers I shall pursue it further. Its Volatil Spirit provokes Urine, as well as that of Urine it self. Both the one and the other may be given in any Liqueur from ten to thirty Grains. The same may be said of the Spirit of Man's Blood. But since I am to touch upon these things elsewhere, I shall now take leave of them.

*Stones
found in
Animals.*

Stones bred in the Bladder of Animals, the Oriental and Occidental Bezoar, and those found in Gall-Bladders, are, all of them, Diuretick and Sudorifick: by reason that they partake of the nature of Sal Armoniack. Only the Oyl and Earth they are incorporated with, cramp and lessen their Virtue.

*The Difference of
Diseases
requiring
Diureticks.*

The Diseases that call for Diureticks, are as different as their way of Operation. In general Diureticks are proper when the Blood is over-run with *Serum*, when the Spirits are stupid, when obstructions beset the Kidneys; in short, they are useful in Asthma's, Pleurifies, and Nephritick Colicks.

When the Sulphur of the Blood is too much exalted in Inflammations of the Kidneys, continual fevers, or Suppressions of Urine, in such cases, I say, Acid Spirits, Cream of Tartar, Nitre, &c: are proper Diureticks. Now the Exaltation of the Sulphur is known by the Redness of the Urine, and heighth of the Pulse. For Obstructions proceeding from the Gravel, or any Concretions of the Sulphureous Parts, such as we sometimes meet with in Dropsies; for these disorders we imploy the *Vegetable Salt*, Spirit of Turpentine, Aperient Roots, and whatever abounds in Alkali's. In the mean while we must take care that we do not administer Diureticks, till the Body be prepar'd by Purgatives: lest the gross humours should be hurried into the Urinary Passages, and so inflame their Obstructions.

I shall conclude this Chapter with Bathes of Hot Water. They enlarge the Urinary Pipes, increase the quantity of *Serum*, and consequently promote the Evacuation of Urine. In Nephritick Colicks they are of incomparable use.

A List of DIURETICK Medicines.

VEGETABLES.

ROOTS.

<p>OF Eryngo, <i>Smallage,</i> <i>Rest-harrow,</i> <i>Quitchgrass,</i> <i>Parsley,</i> <i>The Rindes of the</i> <i>Caltrop roots.</i></p>	}	<p>By way of Pissane; from half an Ounce to an Ounce for every Pint of Liquor.</p>
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LEAVES.

<p>Of Marshmallows, <i>Pellitory of the Wall,</i> <i>Saxifrage,</i> <i>Ground-Ivy,</i></p>	}	<p>A handfull of these in De- coctions. Or their Di- still'd Waters, from two to six Ounces.</p>
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FRUITS.

Walnuts Skins; twelve of them in a glass of Wine.
Winter-Cherries the like Number in Wine.
Heps ten or twelve of 'em in Wine.

BERRIES.

<p><i>Elder-Berries,</i> <i>Dwarf Elder-Berries,</i> <i>Juniper-Berries.</i></p>	}	<p>By handfals in Wine.</p>
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JUICES.

<p><i>Birch-Sap,</i> <i>Rape-Juice,</i> <i>Citron-Juice.</i></p>	}	<p>By spoonfals in some Ve- hicles.</p>
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ROSINS.

Turpentine to half an Ounce in a Bolus:
Balsam of Peru to two drams.
Capivi eight drops with Sugar.

ANI-

*Wood-lice,**Toads,**Worms,**Snails,**Crabs,**Spanish-flies to Eight Grains in Infusion.*} To two scruples in Powder,
or in Wine.

MINERALS.

*Common Salt.**Nitre.**Vitriol.**Lima.*

CHYMICAL MEDICINES.

*The Acid Spirits of Salt, Sulphur, Vitriol, Allum,
Sal-Armoniack, Nitre, to as much as sufficeth for
an agreeable Acidity.*

DISTILLED WATERS.

*Of Pellitory of the Wall, Winter-Cherries, Wal-
nuts, Rapes, Elder-flowers, to four Ounces.**The Spirits of Juniper, Turpentine, Urine, to thirty
drops.*

SALTS.

*Nitre, Sal prunel, Sal Armoniack, the Vegetable Salt,
Salt of Tartar, Salt of the Rinds of Beans, of Broom,
Tartar Vitriolated, Steeled Tartar, &c. to a dram.*

EXTRACTS.

*Of Juniper,**Rob of Elder.*} From one to two scru-
ples.

EXTERNAL Diuretick Medicines.

*Mallows,**Marshmallows,**Brank urfin,**Linseed,**The four Farina's,**Oyl of Scorpions,**Oyl of Worms,**Toads, &c.**Blistering Plaisters, &c.*} By way of Decoctions,
Cataplasms or Fomenta-
tions.

FORMS for Prescribing Diuretick
MEDICINES.

A Diuretick cooling Pisan to be used against Fevers, Bleedings, and other Fermentations of the Blood.

Take of the Roots of Strawberries, Quitchgrass, and Sorrel, of each an Ounce. Boyl them in two quarts of Water till a fourth part be wasted, add to the strained Decoction, of the Spirit of Vitriol, as much as sufficeth.

An Aperitive Pisan for Suppressions of the Terms, and Obstructions of the Bowels.

Take Parsley, Smallage, and Eryngo Roots, of each an Ounce, Cinnamon half an Ounce. Boyl them for the space of one Hour in three quarts and a half of Water; and add half an Ounce of soluble Steeled Tartar.

A Diuretick Wine against the Gravel.

Take of the Roots of Good-Henry, or All-Good, sliced, one Ounce; Winter Cherries half an Ounce; Infuse them in two quarts of white Wine: And take a Glassfull two or three Mornings fasting. Repeat the Infusion every Month.

A Remedy for the Nephritick Colick.

Take a spoonfull of the juyce of Rapes; mix it with half a Glass of Spanish Wine and drnk it up.

A Diuretick Pisan for Hydropical Persons.

Take of the Roots of Eryngo and Rest-Harrow, of each an Ounce; Ash tops, two Ounces; Chervil leaves, two handfuls. Boyl 'em in four Quarts of Water, till
a fourth

a fourth part be evaporated. In the Strain'd Liquor dissolve two drams of soluble Steeled Tartar. Let the Patient make use of it as his ordinary Drink. In the mean while, Remember that almost all Ptsanes are improper for Hydropical Persons.

A Wine for such as are liable to Nephritick Colicks.

Take ten Quarts of sweet white Wine, that has not yet fermented; turn it up in a little Barrel, so as to leave some Empty Room. Then add two Ounces of Fennel Seeds, Aniseeds, Carrot Seeds; one Ounce of Caraway Seed, four Ounces of Gromwel Seed. They being all well pounded. After the Wine has wrought and becomes clear, take a glass full every Morning fasting.

An Emulsion against Suppressions of Urine arising from the Inflammation of the Neck of the Bladder: Which may be us'd in the Beginning of Claps.

Take Eight large Almonds; Take off their Skins in boyling Water. Pound 'em in a Marble Mortar with a wooden Pestle; and add half an Ounce of the four larger Cold Seeds well pick'd, pour upon all three large glass fulls of Water, and continue to beat till all becomes white. Then add half a dram of Sal-prunel, and an Ounce of the Syrup of Marsh-mallows.

A Diuretick Lye good against Cachexies, Dropfies, Leucophlegmacies.

Take half an Ounce of the Ashes of the Barks of Bean-Stalks, an Ounce of Broom-Ashes. Pour upon 'em three Pints of white Wine. Let 'em digest four and twenty hours. Then strain out and reserve the Wine. Half a Glass or a whole Glass provokes Urine, and dissolves the tartarous parts which hinder the separation of the Serum.

An

An Emulsion for a heat of Urine arising from a sharpness of the Salts, or a Clap, Dysury, &c.

Take Two drams of Melon Seeds cleans'd, a dram of Citrus Seed, beat them in a Mortar, pouring in by degrees six Ounces of Pellitory Water, and an Ounce of the Syrup of Marsh-mallows.

A Julep for the Suppression of Urine that attends Burning Fevers.

Take Four Ounces of Marsh-mallows or Lettuce-Water. Dissolve in it an Ounce of the Syrup Diacodium, or of the Syrup of Water-Lillies, with ten drops of Liquid Laudanum.

A Remedy against the Gravel.

Take a dram of the Bark of Caltrop-Roots, Infuse 'em in a Glass of white Wine, and drink it next Morning. The next day after make use of the following Decoction.

Take a handful of Pellitory of the Wall, a dram of Sassafras, a dram of Aniseed, and half a dram of fine Cinnamon. Boil all in half a Pint of Water. Take the pot off the fire and cover it close, and let 'em stand in Infusion all night. Next day let it boil a little again. Then Dissolve in it two Ounces of Sugar-Candy. Strain out the Liquor, and let the Patient drink it. Repeat this Remedy every Month. Monsieur Baviere Lieutenant of Languedock was cur'd by it, and has publish'd it almost in this form.

Another borrow'd from Riverius his Observations.

Take the dry'd brains of a Magpye, pulverise, and exhibit it in a Glass of white Wine.

A Diuretick Powder.

Take a dry'd Toad; pulverise it, and add to it a hundred Wood-lice dry'd and Pounded. Give this Powder from fifteen to thirty Grains. It is a good Diuretick for Hydropical Persons.

A Diuretick Syrup.

Take a handful of Ground-Ivy, Juniper-berries, Twenty Winter-Cherries, two drams of the fix'd Salt of Tartar. Boyl them in a quart of Water till the half be evaporated. Strain thro a Linnen Clout, and with a Pound of Sugar reduce it to the Consistence of a Syrup. Dose an Ounce in any Diuretick Vehicle.

Diuretick Pills.

Take equal quantities of Venice Turpentine, and white Vitriol pulveriz'd. Mix and make Pills. Dose, from half a dram to a Dram.

A Diuretick Clyster.

Take a quart of the Decoction of Mallows. Dissolve in it half an Ounce of Turpentine mix'd with half an Ounce of its own Oyl, and two Ounces of the Oyl of Walnuts.

A Diuretick Distill'd Water for wasting the Stone.

Take of the Juices of Leeks, Onions, and Radishes, of each two Pound; of the Juices of Limons, Pellitory of the Wall, and Mouse-Ear, of each half a Pound. Let 'em Digest and Ferment, then add Calcin'd Christal, and Pigeons Dung, and so distill. This Water is given from one to two Ounces. It may be added in Injections for the Bladder.

C H A P. VI.

Of Anti-Diureticks.

Sometimes it so falls out, that the frequent use of Diureticks melts down the mass of the Blood, and opens the pores of the Kidneys, to that degree that the Body is drain'd of the Serum, which should Convey Nourishment thro' all its Parts. When Persons are in this Condition, all their drink passes immediately, and the Urine is but slightly Tinctur'd with the Salts and Sulphurs of the Blood. This Disease, Physicians call a *Diabetes*. Sometimes again the Salts and Sulphur of the Blood go off with the Serum; and because their Digestion and Union with it is so Short and Superficial, they presently fall to the bottom, having a taste Sweet like Honey. For the Sulphur being undissolv'd, do's so cover and emprison the Saline particles, that they reach no further than a Sweetish Taste. As for the thirst and Fever that molest Persons under such Circumstances, their cause is so obvious, that I need not mention it.

I am apt to believe that this Disease may also arise from the Oily Consistence of the Blood, which hinders it to incorporat with Drink. In Order to cure this disease, we must endeavour to promote the Union of the Blood and Drink, especially when it proceeds from the cause last mention'd. To this purpose the Salt of Tartar, Lixivious Salt of Wormwood, Nitre, and the *Vegetable Salt*, are very proper. But above all such Med'cines as abound in Volatil Parts are to be prefer'd, as being fittest for effecting the Union. Twill likewise be requisite, they should enjoy some Narcotick Vertue, to prevent the Dissolution of the Blood: Upon which ac-

*The bad
Conse-
quence of
Diureticks.*

*The Cause
of a Diabe-
tes.*

count Venice Treacle, tho it may seem to inflame all the Symptoms, yet 'tis very Serviceable.

When this Disease arises from the Dissolution of the Blood, we ought to imploy soft thickning Ingredients, such as Gum Arabick, Gum Tragacanth with Milk, Narcoticks, &c: Comfrey and Marsh-mallows Roots in Pisans, Amber in Pouder, Coral in Pouder, &c:

'Twas observ'd above, that many Diureticks are of opposite Families. Accordingly we see in this case, some of 'em are of use to redress the Disorder that Others have occasion'd. To Instance. Acid Spirits are good Diureticks. Yet we prescribe 'em for Stopping or moderating an excessive Flux of Urine, occasion'd by Cantharides.

A List Of ANTI-DIURETICKS.

Fix'd S A L T S.

OF Wormwood,	}	From fifteen to thirty six Grains.
Tamarisk,		
Broom,		
Tartar,		
And Fix'd Nitre,		
Oyl of Tartar per deliquium.	}	
Venice Treacle	}	From half a dram to a dram.
Confection Alkermes.		
Hyacinth.		
Coral,	}	From half a dram to two scruples.
Seal'd Earth,		
Bole Armoniack,		
Crabs Eyes,		
Gum Arabick,		
Gum Tragacanth,		
Amber.	}	

Comfrey

Comfrey Roots,
Marsh-mallow Roots,
Plantane Leaves,
Knot grass,
Horse-tail,
Flowers of Sumac. } In Ptisanes.
Opium, Laudanum, to a Grain.

Gelly of Quinces to half an Ounce.
Milk to a quart a day.
Verjuice, Citron juice, Acids, &c.

FORMS for Anti-Diuretick Recipe's.

An Electuary against an immoderate Flux of Urine.

Take two Ounces of the Gelly of Quinces, Incorporate them with two drams of the powder of Vipers, a dram of prepared Coral, a dram of Mastick in powder, a dram and an half of the powder of the inner skin of a Pullets dry'd Gizard, a scruple of Laudanum prepared with Castor. Mix all together, and take from half a dram to a dram at a time; drinking above it a glass of Red Wine,

A Pouder for Persons under a Diabetes.

Take of Amber well pounded two drams; Gum Arabick in Pouder, half an Ounce; Coral and the Bone taken out of a Stag's heart dry'd and pulveris'd, of each a dram; Laudanum in Pouder, half a scruple. Dose, from half a dram to a dram in a Glass of Ptisane or any Convenient Distill'd Water.

Willis his Distill'd Water for a Diabetes.

Take Eight handfuls of Cypress Tops, two pound of the whites of Eggs beaten up, half an Ounce of Cin-
Q 3 namon.

namon. Chop the Cypress top and Cinnamon very small, and add to 'em Eight Pound of New-Milk. Then Distill; and in the mean time, take care to prevent an Empyreuma. This Distill'd Water is given to six Ounces.

CHAP. VII.

Of Sudorificks and Diaphoreticks.

The distinction between Sudorificks and diaphoreticks.

WE call Med'cines Sudorifick, when they cause Sweat; and others Diaphoretick, when their operation reaches no further than an Insensible Transpiration. Both of 'em put the Blood in Motion, and agitate its Parts, so that the Glandules of the Skin strain out larger quantities of Serum than ordinary. Oftentimes Diureticks cause Sweat, and Sudorificks promote Urine, by reason that both of 'em are pointed upon the Serosities of the Blood. Now when the Serum finds an easy passage one way, 'tis not at the pains to dispute a difficult one elsewhere. For this Reason we see that in Loosenesses, and excessive Evacuations of Urine, transpiration declines; and on the other hand, as it Rises, the other falls in proportion.

The difference of the Humors.

The matter Evacuated by Insensible Transpiration, differs from that of Sweat. The former must needs be extream fine and delicat, and possess'd of a Motion brisk enough to convey it over the Rubs it meets with in the Pores of the Skin. On the other side. The Humours Evacuated by Sweating, are more serous and less Subtile. Thus we find that all agitations of the Blood are not attended by Sweat. Because, besides the agitation of the Blood, Sweat supposes coarse Serous parts in it; or else if the parts are subtile we must put the agitation out of the Case, otherwise there's no Sweating. Accordingly Experience shews, that Burning Fevers are rarely

rarely attended by Sweat, by reason that the Blood being stock'd with subtile parts, and being ingag'd in a violent motion; cases standing thus, the small quantity of Serum that is, is so toss'd about that it flies away by way of Insensible Transpiration. Again, in the declensions of the Fits of Agues we see they Sweat plentifully, tho there was nothing of it during the violence of the Fit. The Reason is obvious, *viz.* When the agitation is over the Parts joyn and link together, and being beaten back by the Pores of the skin assemble into drops.

In general, if we desire either to promote Insensible transpiration, or procure Sweat, we must put the Blood in a brisker Motion, disengage its Particles one from another, and open the Pores of the Skin: when the Blood is spur'd about it detaches some parts to the Pores of the Skin, which engage themselves there in the same manner as those allord to the Kidneys, of which above. If the Parts of the Blood are incoherent and not exactly united, then the Particles fit for the Pores of the Skin will easily get off, and so a larger measure will be strain'd out. The patency and opening of the Pores is absolutely necessary for Sweating: But it does depend upon Internal Medicines: A warm Bed, Stove, Hor-Baths, &c. are the means that compass it.

Notwithstanding that the opening of the Pores is absolutely necessary to procure Sweat; yet there are some Country folks that go another way to work. They put the Patient into Cold Water, or wrap him up in a Covering drawn through Cold Water: then they put him in Bed. And after the cold Covering is remov'd he falls a Sweating; and frequently obtains a Cure. *Willis* offers at the Reason of this Experiment. He tells you the shutting of the Pores heightens the Fermentation of the Blood; just as new Beer in a Barrel, the closer ye stop the Barrel, the more 'twill work up. To my mind the Case stands thus. The Pores of the Skin being shut by the External Cold, the Parts that formerly

merly had an uncontroll'd passage are now stop'd. Now upon the Reböund they gather to a Head, and appear in the form of Drops.

*Medicines
act ac-
cording to
the disposi-
tion of the
Blood.*

Tho the matter evacuated by Insensible Transpiration has only a gradual advantage of Subtily and a quicker motion beyond that of Sweat; yet there are some Parts disposed of the former way, that cannot without great difficulty be converted into drops of Sweat. We see Oyl boyling on a Fire makes no steam or vapor. The Case is the same in reference to the Blood. There are some Parts in our Blood, that scarce any manner of agitation or motion can turn into Sweat. However this occasions no great difference among the Medicines employ'd on either account. They are almost the same, or at least if there be any small difference it must turn upon this: that Medicines promoting the insensible transpiration are a little more Volatil and apt to put the Blood into a quicker motion, than those which procure Sweat. And yet Experience shews that they oftentimes mutually exchange, and act the opposite Parts. Therefore I conclude that Sudorificks and Diaphoreticks either promote the Insensible transpiration, or procure Sweat, according to the occasional disposition of the Blood, and Pores of the Skin.

*The waste
of Liquid
substance is
very consi-
derable.*

The matter that exhales from our Bodies, is a considerable deal. The Subtile matter ranging up and down, always Scrapes off something of the Parts, and the Glandules of the Skin are continually squeezing out the Serum, to that degree, that *Sanctorius* affirms we waste more that way in one day, than we Evacuate by Stool in fifteen. This matter voided by the pores of the Skin, is also corrosive; for 'tis the sharp Salts cashier'd in the Fermentation of the humours that produces Sweat, or Insensible Transpiration.

*Diseases
arising from
its suppres-
sion.*

For this Reason the suppression of Sweat or Insensible Transpiration, occasions an infinity of Chronical and Acute Distempers. If the matter retain'd be full of fermenting principles, it raises Continual fevers:

fevers: If the matter be pretty free from such principles of it self, and the first Passages be well Stock'd with suitable humours to supply 'em, then we are accosted by Intermitting fevers: If the matter be corrosive, we are doom'd to malignant or Pestilential fevers. If the matter is Subtile and Sulphureous, Dotage or some Inflammation accompanies the Continual fever. When 'tis Acid and Gross, Phthisick and Consumptions follow it. When 'tis bitter; it causes Bilious Loosenesses and Vomiting. If 'tis very Gross, and partakes but little of a Corrosive Acidity, it brings on fits of the Gout or Colick. This General Idea may serve to discover the Nature of the Different Diseases that call for different Diaphoreticks. All Diaphoreticks put the humours in Motion. But they go several ways about it. Some are full of Volatil Salts, and by displaying their own principles, perhaps give the ethereal matter an Opportunity of more Action than ordinary, and so produce the motion we speak of. Those which are of this Character are unproper in Continual or Malignant fevers, unless there be a disposition to Sweat; otherwise they only stir up the humours which are too compact to part with their serous Part. Therefore we only allow 'em in the beginning and End of these diseases; but very rarely about the height.

Under this Head we range the Volatil Salts of *Diaphoretic* Vipers, Hearts-horn, Man's Blood, Urine, Man's *ticks of the* Scull, Sal Armoniac &c: or whatever is impregna- *first Rank.* red with these Salts, as the Powder of Vipers, Sal Armoniac, &c: But we are to observe that three or four grains of these Volatil Salts are of more efficacy than fifteen or twenty Grains of the Medicines they're drawn from.

But there's an Infinite number of Med'cines that contain no Volatil Salts, and yet are Sudorifick. In this Rank we place Diaphoretick Aatimony, mineral Bezoar, Crabs Eyes, Coral, Seal'd Earth, Lemnian Earth, burnt Harts-horn, Calcin'd Shells. Now if all Sudorificks did only operate in the man-
ner

ner now mention'd ; then these Medicines containing no Volatil Salts, and being incapable to put the Blood in motion would be scor'd out of the List. But there are some cases, where the Coagulation of the Blood by gross Acids is the only impediment of sweat. And if that were remov'd, it would succeed of it self. In those Cases the Alakin Remedies now mention'd imbibing the Acid, set the parts of the Blood at Liberty, and so occasion a more plentiful separation of the Serum in the Glandules of the Skin. Sometimes perhaps the Alkali's may ferment with the Acids they meet with in the Body, and so stir up the Humors to throw out some part towards the Surface of the Skin. These Alkali's are proper in the height of Continual Fevers, and the hot fits of Agues. But they must not be administred in the very beginning, for Reasons mention'd in my Treatise of Acute diseases.

Sulphureous and Balfamic Diaphoreticks.

There is yet a third sort of Sudorificks behind, which contain no Volatil Salts, and yet cannot be given in with the Alkalies. These are China Roots, Guajacum, Sarsaparilla, Sassafras, Boxwood, Butterbur, Burdock, Carduus Benedictus, Scabious, Juniper, wild Marjoram, Penny-Royal, Thyme, Sage, Marjoram, Bay-berries, Red Poppies, Venice Treacle and Brandy. All these Remedies put the Blood in motion by vertue of their subtile Sulphur : They intangle the parts of the Blood, and emprison for some time the Ethereal matter. Whereupon it gathers strength and sallies out with such Violence that it tosses the Humors about, and occasions either sweat or a copious insensible Transpiration. Sometimes we joyn Acids with these Sulphureous Med'cines, to inforce the Motion and Dissolution of the Blood : For the more massy the parts be, that are in motion, the more rapid they are, and continue their morion the longer ; just as a bar of Iron burns longer and more violently than a Coal.

Sudorificks lessening the motion of Blood.

In a fourth place we may give in such Sudorificks as calm the Blood, and lessen its Morion ; such are Opium, the Syrup of white Poppies, &c : They carry the Serum but softly along the Surface of the Glandules

Glandules of the Skin, and so give it leisure and opportunity to soak in and strain it self through them. For we find oftentimes that the over-rapid motion of the Blood is an impediment of sweating, because the Serum is not allow'd time enough for a regular Filtration.

These are the General ways of the Operation of *Sudorificks*. But if we desire a competent knowlege of 'em, we must condescend further to Particulars. I shall only add, that *Diaphoreticks* charg'd with Volatil Salts are to be us'd in all Diseases, where the Blood and Lymph move easily, or when the Lymph turns Acid and congeals; I mean Apoplexies, Palsies, Lithargies, Epilepsies, Suffocations of the Womb, Night-mares, Convulsions, Scurvey, &c. But we must be very cautious that they draw not out only the subtile parts, and leave the Coarser behind. Therefore in *Scirrhus's* of the Liver, and other Bowels, Dropsies, Cachexies, &c: they are rarely us'd:

Diaphoreticks of the second order, which do not over-fret the Blood, and yet dispel Acidities; these I say are excellent in the Scurvy, Hypochondriacal Melancholy, Dog Hunger; Pica, *Scirrhus's* of the Liver and other Bowels, Suppression of the Terms, and all obstructions arising from Acids. They are likewise made use of in Bleedings, because they render the Blood Fluid, now Bleedings are frequently occasion'd by the thickness and Coagulation of the Blood, hindring its Circulation. And sometimes a Volatil Acid may be the cause of a Flux of Blood. Now this sort of *Diaphoreticks* drink in the Acids; upon which account they are frequently us'd in Consumptions and Loosenesses.

Those of the third Rank are of excellent use in all *The Ven-* Diseases where the Mass of the Blood is over-run with *grofs Acids*. They put the Blood in motion, and *phureous* with their Oily parts cover and intangle the Acids, *Diaphore-* so that they cannot grate upon the parts as they pass. *ticks.* For this reason they are us'd with success against the Pox, Gout, Leprosie, inveterate Scabs, malignant Ulcers,

Ulcers, the Kings Evil, &c: If they partake any thing of Volatil Salt we may employ 'em against the Plague, and all Diseases arising from Corrosive particles. Thus Venice Treacle, Water of Carduus Benedictus, Butterbur Water, &c: are recommended on such occasions. Moreover, those Med'cines which possess both a Sulphur and Volatil Salt, are us'd in Pluresies and other Inflammations; because the Volatil Salt dissolves the Sulphur that occasion'd the Stagnation. When the suppression of sweat causes a redundancy of Bile in the Guts, in that case we are wont to joyn Acids to these Diaphoreticks; because they calm the motions in the first passages, while the Volatil Alkali's and Sulphur push on the humour, from the Center to the Circumference.

Narcotics are rarely us'd upon a sweating design. However they are not amiss in violent Colicks and extremity of pain. We may mix 'em with Volatil Salts, and Sulphureous Diaphoreticks; To the end, that while these stirs up the Blood and Spirits, they may prevent the increase of Pain that might ensue. Sudorificks and Diaphoreticks do sometimes act only the part of Alteratives. Nay they always begin to change the disposition of the humors before they come to evacuate, and therefore they must be frequently repeated if we expect any sensible benefit by 'em. We find that a Sudorifick at first raking causes no sweat, but the second, third, or fourth, Dose does: upon the whole, 'tis advisable to begin first with small Doses, especially if the Med'cine has active Principles, for fear the humours should be too much toss'd.

The General Doses of Diaphoreticks.

All Volatil Salts are given from six to fifteen Grains, Spirits from six to twenty Drops, the Powder of Vipers from ten to thirty Grains, Diaphoretick Antimony and Mineral Bezoar from ten to thirty Grains, Crabs Eyes from ten to thirty Grains, Earths from a scruple to a Dram.

The way to draw Volatil Salts.

The Volatil Salts of Mans Blood, Harts-horn, Mans Scull, &c: are thus prepar'd. We dry the Blood or Horn and put 'em into a Retort, to which we

we lute a Receiver. Then we give a gradual fire, and fetch ont a Phlegmatick Liquor, an Oyl and a Volatil Salt. When the Vessels grow cold, we take out what is in the Receiver, and put it all into a long Neck'd Glass cover'd with a head, and plac'd upon a fire of Sand, and in a little time the Volatil Salt sublimes up to the Neck and Head, in a white Crystallin form. These Salts are easily melted by the Air, and therefore call'd *Volatil Salts*. To prevent their melting we may preserve 'em in Spirit of Wine.

Roots are prescrib'd in Ptisanes by Ounces, Leaves by handfuls, Distill'd Waters by Ounces in Juleps, the Extract of Juniper from a Scruple to Dram in any Distill'd Water. *The Doses of the parts of Sudorific Plants.*

Narcoticks, viz. *Laudamum* and *Opium* are given from one to two or three Grains. The Syrup of Poppies from half an Ounce to an Ounce and a half.

External Sudorificks are either Stoves, hot Baths, External or Bottles full of Hot Water. They enlarge the *Sudorifics*, pores of the Skin, and facilitate the passage of the sweat. They are admirably servicable where the sweat is interrupted by Obstructions in the Glandules of the Skin; as in Leprosies, Pocky Scabs, Scurfs and all Cuticular Diseases. They are likewise useful against the Gout, and have this advantage that their operation is more certain than that of inward Sudorificks.

To conclude these general Remarks upon Sudorificks. I must advise young Physicians not to give the Volatil and Sulphureous Sudorificks to such persons as are apt to faint often, by reason of Clotts of Blood in the Heart. Because that sort of Medicines stir up the Blood before they dissolve it, and so may occasion fatal swoonings. We must likewise take care that no Vessel burst upon the use of such Medicines, therefore we forbid such in Spittings or Vomings of Blood, Dysenteries and other bloody Fluxes. They are also to be avoided in Inflammations, or when the Blood is too much dissolv'd, or ferments too high; and discovers this its disorder by the fluid
Consistence

Consistence of the Liquors, and an unusual weakness. If thirst molest the Patient during the time of sweating, he may drink some warm Liquor to promote the Sweat. But if he be over weaken'd we give him a glass of cold Wine. Sometimes in such a case we may give Acids, especially the Syrup of Lemmons, Barberies, &c: but withal very cautiously.

The strongest absorbents are those of Antimony.

As for Sudorificks that operate without making any extraordinary motion. The most powerful of 'em, are *Potrius* his Antihectick, Diaphoretick Antimony, and Mineral Bezoar. Upon which account I purpose to be particular in the Description of the Sudorifick preparations of Antimony; which I omitted in the foregoing History of that mineral. An exact Description of these preparations may serve to shew how these Medicines perform their Office in the Body: For since they are nothing but Antimony disguis'd, they'll shew how an Emetick and Purgative vertue may be transform'd to that of Sudorificks.

But the order of our Scheme obliges me to begin with Vegetables.

Vegetable Sudorificks.

The principal Vegetable Sudorificks are Guajacum, China, Sarsaparilla, Sassafras, Boxwood, Burdock, Juniper, Swallow-wort, Germander, Scabious, Valerian, Angelica, Masterwort, Zedoary, Meadsweet, Carduus Benedictus, Speedwel, Bays, Penny-royal, Wild Marjoram, Common Marjoram, Tansey, Wild Poppies, Yellow Poppy, Carrots, Fenel, Anis, Melilot, Fenugreck, Golden Maiden-hair, &c: Several of these Plants, their Principles and Vertues, are already accounted for; and many will come in under the Heads of Carminative, Arperitive, Cephalick and Stomachical Medicines. Therefore I shall only take notice of the Principal sort, and such as cannot conveniently be plac'd elsewhere.

Guajacum.

Guajacum by its Analysis affords a Phlegm, and Spirits, a great deal of Oyl, and some Lixivious Salts. This Plant has a Wood, a Bark, and a Rosin belonging to it. The Wood or Bark are most in use;

use. The former contains less Spirit and Oyl, but more Phlegm and Earth. Therefore the Dose of the Woods Decoction is larger than that of the Bark: Both of 'em are serviceable against Venereal Diseases, the Gout, Phtisick and Catarrhs. Their Oily and Balmy parts qualifie 'em for softening the sharp Salts that give rise to those Diseases. The Rectified Spirit is an excellent Diuretick, given from half a Dram to two Drams in any convenient Vehicle. Some say it purifies the Mass of Blood, and may serve as a menstruum to dissolve and extract the Tincture of Coral. The Black Oyl separated from the Spirits, may be used for the Toothache, by applying it with Cotton to the Tooth: But its stink is so unsufferable that few will allow of it. 'Tis employ'd outwardly against a *Caries* of the Bones, or mix'd with some Plaister for Venereal and Schrophulous Tumours. It may be Rectify'd by distilling it with Sand; thus it loseth its blackness much of its stink, and may be dissolv'd with Sugar or the yelk of an Egg, in any Convenient Vehicle, as being an Incomparable Remedy against Vapors, and Convulsive or Venereal Diseases. Dose; from four Drops to twelve. The Rosin of this Tree call'd the Gum Guajac, dissolv'd to six or seven Grains in Spirit of Wine Tartaris'd is an excellent Remedy for the Clap. As for the Wood, or Bark, we commonly put to a Pint of Water, an Ounce of Wood, or half an Ounce of the Bark, and boyl it upon a slow Fire till the third part or a half be evaporated. We may also digest the Bark with Wine and extract a Tincture, which has almost the same Vertues as the Decoction. An Extract made of this Tincture, has the same Vertue as the Rosin, only the Extract is given in larger Doses, by reason that it is alloy'd with Foreign particles. Some alledge that the Oyl of Guajacuni is *Rulandus* his *Oleum Heracinum*. But that Oyl is the Oyl of Hazel, which is said to be an incomparable Remedy against Convulsions, or for bringing forth a dead Child.

Boxwood.

Boxwood enjoys the same Principles and Vertues as *Guajacum*. Only 'tis more Anodyne. By Distillation it yields an Acid Spirit, a black and stinking Oyl which may be Rectified just as that of *Guajacum*, and administred in the same Dose against the same Diseases. However 'tis more Narrotick, and applied with Cotten to the Teeth cures the Tooth-ack, softens the Piles and pacifies pain in any part. The ashes of this Wood afford a Lixivious Salt extracted with Lye, which possesses the same properties as that of *Guajacum*. The Extract of the Wood is an excellent Sudorifick, and Anti-Epileptic. 'Tis given from ten Grains to half a Dram. The Acid Spirit, they say, dissolves Coral and makes a good Anti-Epileptick Tincture. In Decoctions we may observe the same proportion of the Wood to the Water, as in that of *Guajacum*. They are good against the Gour and Venereal Distempers.

Sassafras.

Sassafras is a Wood that gives a pleasant smell like that of Fennel. By Distillation it yields the same product as other Woods, namely Acid Spirits, and a great deal of Oyl well stock'd with Alkali's. Mr. *Tournefort* demonstrated before the Royal Society, that if ye mix it with Spirit of Nitre well deflegmated, it presently produces a Clear Flame. This Wood is not so rich of Active principles as the two above mention'd. We must always take care that the Wood be cover'd with its bark, because that enjoys a larger share of Volatil and Oily parts. In Decoctions this Wood is a Sovereign Remedy against Catarrhs. Some make a Tincture of it with the Spirit of Mother of Thyme: But the Tincture will be much the better for adding a little Amber. Some Boyl *Sassafras* with a little *Sal Armoniac*, to retrieve Digestion. In short 'tis a Considerable Ingredient in Decoctions against the Pox, Gour, Drop-sie, &c: 'Tis somewhat Diuretick. Some use its Infusion as a Remedy against Barrenness.

Juniper.

Juniper affords several sorts of Medicines, as Wood, Berries, &c: The principles of the Wood are much the same with those of *Sassafras*, But I have

Chap. VII. Of Sudorificks and Diaphoreticks. 241

have treated off this Plant at large under the Head of Diureticks.

Salsaperilla is a Root, which is not so rich of active Principles as Guajacum; but comes near to it in Vertues. We use it in Sudorifick Decoctions against the same Diseases; Particularly Scrophulous humours, Dropsies, Pox, Gout, Catarrhs, &c. Others make a more Universal use of it, prescribing it against burning fevers, especially such as are attended by inward Inflammations, as the Pleurisy, Peripneumonia, &c: Probably they ground their choice upon the advantage that oftentimes accrues from Sudorificks in such cases. But they had need take care they do not use it in the beginning of the Disease, or upon the point of relapses: Because at that time the Serum is not yet laden with the heterogeneous Particles, and therefore Sweating will be to no purpose.

Burdock is a Root imploy'd in Sudorifick designs, upon the same foot with Salsaparilla. I took notice of this Plant among the Diuretick Ingredients, and therefore shall now pass over it. In a Pleurisy we are wont to procure Sweat by giving the Pouder of the Root from half a dram to a dram in the Water of *Cardus Benedictus*.

China is a Resinous root somewhat Gummy, 'Tis extremely Rich in Sulphureous parts. We use it by way of Decoction or Extract, as we do the other Sudorifick Roots and Woods, against the Pox, Catarrhs, Phthisicks, Cachexy, Jaundice, or where-ever we suspect hard Swellings or Obstructions. In the wandering Gout we mix it with other Medicines, as the Indications Require. 'Tis an incomparable Remedy in Scrophulous cases, but then 'tis better to exhibit it in substance, from a dram to half an Ounce at a time. To render it a little more agreeable, we may infuse it all Night in Broth in a *Balneum Marie*, and exhibit the broth one Morning, and the Pouder next day.

Carjophyllata possesses the same Vertues as China and Salsaperilla; It abounds in Acids, and Aromatick Oyls: and is rather more cry'd up against De-

R

fluxions,

fluxions, Catarrhs, and Rheumatisms. *Peracelsus* esteems it mightily. He mix'd it with *Acorus* Roots, Others Infuse it with *Sassafras* and *Rosemary* leaves, in white Wine for seven or eight hours in a *Balneum Mariae*, the Vessel being stop'd close; and exhibit a draught some hours before meals. This they do in the case of Catarrhs. It may likewise be made use of against Obstructions, Jaundice, and depravations of the Stomachical ferment.

*Carduus
Benedictus.*

Carduus Benedictus is a Plant void of smell, bitter, and full of Essential Salts, with Sulphureous parts that are somewhat Volatil. Its Distill'd Water is little worth, unless ye joyn the fix'd Salt to it; Because by distillation it affords neither Volatil Salts, nor swelling Oyls. But if ye ferment the Juice of the Plant with a little yeast, ye may draw off a Spirituous Water, impregnated with Oyl and Salts made Volatil by Vertue of the fermentation. The Extract and Essential Salt of this Plant are Sudorifick from half a dram, to a dram, and are reckon'd good against Pleurisies. They may be given in its own Water or Decoction. 'Tis worth the while to observe that the Juice of *Carduus Benedictus* makes the Urine thick, either by precipitating the ferments, or pushing in its Tartar, or fermenting with the Urine. *Baillou* tells us it makes it fetid. The Poulder of this Plant may be given no less than the Extract in all Inflammations. It tends to dissolve the Blood. Its Lixivious Salt imbibes Acids, but do's not procure Sweat so effectually as the Essential Sort.

*Swallow-
wort.*

Swallow-wort is Sudorifick, Alexipharmacal, Aperient, Discussive, and in the Composure of its Parts, resembles *Carduus Benedictus*. Its Root may be infus'd to an Ounce in a Pint of boyling Water, and the Infusion exhibited in Malignant fevers, as being better than the Pisans made up with *Vipers-grass*, which are generally a little thick and clammy and of little efficacy. The Extract given to a dram, is a good Sudorifick and Aperitive against the Dropsy. If ye apply it outwardly by way of Cataplasm,

it dissolves tumours in the Breasts. *Elfnerus* Recommends the Decoction of the Plant against the Kings-Evil: but he goes upon weak Conjectures. If ye please ye may add it to Vulnerary Decoctions for External use.

Tansy is a Plant that conrains Urinous Spirits, an Aromaticall Oyl, a fetid Oyl, and Earth. Its Juice taken from half an Ounce to an Ounce brings down the Terms. It cures malignant and Intermitting fevers, and procures Sweat. It may be exhibited with an equal quantiry of Wine or any proper Water. The Infusion of the Herb with its flowers in Wine has much the same effect; and besides is very Resolutive. In a Cachexy, Dropsy or Jaundice, we may mix four or five Ounces of the Juice with a third part white Wine. The Decoction of irs Leaves is good in malignant fevers, if it be taken in large quantities. The Leaves distill'd several times with Spirit of Wine, give an Excellent Antiepilep- tick Remedy, to be given by spoonfuls. Externally 'tis good against the Palsy and Rheumatism. *Tansy* Seed is excellent against the Worms.

Mead-Sweet affords some Acid Spirits, some Urinous Spirits, a Concrete Volatil Salt, and a great deal of Oyl; 'tis Sudorifick and Vulnerary. Its Distill'd Water is preferrable to that of *Carduus Benedictus*: The Decoction of its Root is better than that of Vipers-grass. The Infusion of the Root in Wine is good against Spittings of Blood, Dysenteries, Loosenesses, and an Excessive flux of the terms. But its use must be continued for some time. The Extract given to a dram at a time, and frequently repeated, is good in Malignant Fevers.

Water Germander is compounded of almost the same Principles as *Tansy*. Its Decoction is Sudorifick, Stomachical, Vulnerary, and good against malignant Fevers, the Small Pox, Measles, &c: 'Tis likewise imploy'd against Worms. We may boyl the Leaves in Broth, or infuse them in Wine: Or exhibit it by way of Extract or Pouder to a dram. It is a Common Ingredient in the Compo-

Other Sudorificks.

tion of Venice Treacle, Dialcordium, Vinegar of Treacle, and the other Alexipharmacal Confections.

As for the other Sudorificks, namely Angelica, Master-wort, Zedoary Contrayerva, Scabious, Vipers-grass, and Valerian; They are more Alexipharmacal than Sudorifick. And therefore I remit 'em to the Chapter of Cardiacal Med'cines

As for Ground Pine, Germander, Szachas, Sage, Marjoram, Saffron, Cinnamon, Wormwood, Nutmegs, &c: They are more Stomachical or Cephalick, than Sudorifick. In like manner Speed-weel, Bugloss, Ground-Ivy, Wild Poppies do properly belong to the Pectoral or Vulnerary Family. The Carminative and Pectoral Ranks comprehend also Penny Royal, Calamint, Hyssop, Melilot, Wild Marjoram, &c: And the Antihysterical Chapter will bring in Camphyr, Myrrh, Soor, &c: 'Tis true all these Ingredients are Diaphoretick and Sudorifick. But their peculiar Vertues assign 'em other Stations.

Animal Sudorificks.

The Animal Province affords many Sudorificks. Some of which are simply ablerbent as Crabs-Eyes, Boars Teeth, The bones of Pikes heads, Ivory, Hartshorn, bone of a Stags heart, and Unicorns horn. Others contain not only Alkaline fix'd Parts, but likewise Volatil Salts and Oyls. Such are Bezoar Mineral, the Pouders of Vipers, Stag's or Bull's Pizzle, the Blood of a Goat or Hare. Some are Oily and Volatil, as the Infusion of Horle's or Mule's Dung in Wine, or of Pigeons or Pullets dung in Wine; Volatil Oily Spirits, Castor, &c: Others again are simply Volatil as the Spirit of Sal-Armoniack, Spirit of Urine and the Volatil Salts of Animals.

I've already touch'd upon Crabs-Eyes. Boars Teeth, Pike's Jaubones, and Oyster Shells, pulveriz'd and prepar'd, are given to the same use, in the same forms, and to the same purposes as Crabs-Eyes. Unicorn's horn has more Reputation than it deserves, therefore I pass over it.

Harts-

Chap.VII. Of Sudorificks and Diaphoreticks. 245

Hartshorn is reckon'd Cordial and Sudorifick. *Hartshorn*
 We are wont to boyl some handfulls in Water for
 Pifans against Loosenesses, Dysenteries, &c: There
 are several ways of preparing and fitting it for In-
 ternal use. Some Calcine it till it becomes black
 in order to separate its parts; and then give it from
 half a dram to a dram in some Water. Others
 calcine it till it become White, but then 'tis maim'd
 of its Sulphur and Volatil Salts, and forfeits all
 pretensions to any Vertue except that of an Alka-
 line Earth. The best preparation is to Calcine it
 with the steams of Herbs while we distil 'em; and
 then administer it to a dram. Thus it is much more
 effectual than that of the black Calcination. We
 may draw from Hartshorn thro a Retort a Sudori-
 fick Volatil Salt; which do's not differ from other
 Volatil Salts. 'Twill likewise afford at the same
 time a black Oyl which we use outwardly for Ul-
 cers and Vapers. The whole head of the Hart
 yields by Distillation a Sudorifick and Alexipharma-
 cal Water. The Bone of Stag's Heart must be pre-
 par'd like Hartshorn by exposing it to the Streams
 of Aromatical Plants while we distill 'em. The
 Pouder of a Stag's Pizzle may be given from half a
 dram to a dram in a Convenient Vehicle. 'Tis much
 approv'd in Pleurifies and Loosenesses. Sometimes
 We make a Gelly of Hartshorn and Season it with
 Spices.

Ivory has almost the same Vertues as the shavings *Ivory*
 of Hartshorn. 'Tis us'd in Pifans against malig-
 nant Feavers, the Small Pox, Loosenesses, Worms.
 Burnt Ivory is call'd *Spodium*.

Animal Bezoar or the Bezoar Stone, is taken *Bezoar*
 out of the maw of a Ruminating Animal, that re- *stone*
 sembles a Goat and a Hart. 'Tis form'd of some
 Glutinous matter that Distills from the Salivary and
 Stomachical Glandules, and of the Volatil part of
 their food. Several Authors cry up these Stones
 mightily. They tell us they procure Sweat, resist
 poyson, &c. However they are but rarely us'd, parti-
 ly because the Value of the Stone tempts People to

Sophisticat it, and partly because many Noted Authors say they have try'd it several times, and never could see any good by it. 'Tis certain that it can only Operate either by imbibing humours, or by displaying its Volatil Salts; and therefore while 'tis prescribed only to Ten or Twelve grains at a time, can never do great feats. I choose rather to shift it for man's Stone, or stones found in Gall bladders, which we may give from fifteen to thirty Grains. These Stones abound in Volatil Salts and Oyl. Accordingly we find, they procure Sweat, and are of excellent use against the Plague and Malignant fevers. *Rulandus* values the Bezoar at so small a rate that he prefers Harts-horn.

Vipers.

Vipers are the best Remedies that can possibly be us'd, by reason of their Volatil Salts and penetrating Oyl. We may use 'em in Broth, Decoctions, Pouder and Troches, or by way of Infusion in Wine. The common Rule is to take off their head and tail before we use 'em. Indeed 'tis very adviseable to throw away the head, by reason of the Yellow Juice that nestles in its Jaws. Monsieur *Redi* has made it out by several Experiments, that this juice is strong Poyson. Vipers taken by way of Pouder or Decoction, are very serviceable Sudorificks against Malignant and Pestilential fevers, and bites of Venomous Creatures. They are likewise successfully imploy'd against a Dysentery, Pleurisy, the Pox, Leprosy, Inveterat Scabs, &c: We commonly put a Viper or two to a Pint of Broth or Wine. The Pouder we give to a dram. The heart and Liver of a Viper reduc'd to Pouder are by some call'd the Animal Bezoar, and indeed are not much different from it. Externally the melted fat of Vipers is a mighty dissolver. Some give five or six drops of it inwardly in Broth, in the Small Pox. By distillation Vipers affords a Volatil Salt, which is given to Robust persons to fifteen Grains. The Volatil Spirit is given to thirty drops in all the above mention'd Diseases. The Oyl stinks horribly, 'tis good against Vapors, and Discusses Swellings. Vipers distill'd
alive

alive in a *Balneum Mariae*, afford a Sudorifick Water, which is given in any Porion from two to fix drams. If we pour some Acid Liquor upon the Volatil Salt, we have a purified Sal Armoniack, which tho its price be greater, yet its Vertue is but just the same with the common Sal Armoniack. If we take the Tincture of dry'd Vipers extracted with Spirit of Wine, and joyn it to their Volatil Salt, at the Rate of a Pound of the Tincture to an Ounce of the Salt; and distill 'em together, we shall have an Oyly Volatil Spirit. Before the Distillation we may circular and digest 'em, in Order to a nearer Union with one another.

Goats Blood is an Excellent Remedy. *Vanbel-Prepar'd* *monts* Preparation was to tye the fore Legs to the Goats horns, and cut off the Goats Stones. But *Ludovick's Blood* is the easier. He only takes the Blood that Runs out when its Throat is cut, and dries it gently in a Balneum of Steams together with the Serum. Thus it is copiously stock'd with its own Lymph, and becomes shining as glafs. Goats Blood thus prepar'd, is an admirable Diaphoretick, being given from half a dram to a dram. Its Volatil Parts dissolve Clotted Blood. It may be us'd in Pleurifies, Dysenteries, and the Gravel.

Artificial Sal Armoniack is made of five parts Urine, one of Sea Salt, and half a part of Soot. *Sal Armoniack*. We digest all together and Sublime 'em. During the Digestion and Sublimation, the Acid of the Sea Salt unites with the Volatil Salts, and becomes a Saline Salt of Excellent use in Intermitting fevers. 'Tis an admirable Stomachical and Sudorifick Medicine. In fevers 'tis yet more Effectual, if we mix it with some absorbent Pouder such as Crabs Eyes, and exhibit it before the Invasion of the Paroxysm; the Alkali weakens the Acid, and gives the Volatil Salt more scope to exert its Vertue; for, as we all know, fix'd Acids will readily quit Volatil Salts, and joyn in with the fix'd Alkali's. Before we make use of Sal Armoniack, it should be purified, that is, dissolv'd in Water, its solution

filtrated, and gently evaporated. Dose from fifteen grains to two Scruples.

To improve the Preparation of Sal Armoniack, we may mix it with an equal quantity of Salt of Tartar; besprinkle the whole with a little Water, and put it into a Body upon a fire of Sand, having prepar'd a head and Receiver. Then we draw off the Spirit of Sal Armoniack consisting of a Volatil Salt melted with Phlegm. Afterwards we remove the Receiver, and give a brisk fire to sublime the the flowers, which will stick upon the head. The Spirit may be given in any Vehicle from six to twenty drops in proportion to its strength. 'Tis good against Hytlerical, Hypochondriacal, and Sleepy Diseases; it allays fevers, and procures Sweat. The flowers possess the same Vertues, being given from half a dram to two Scruples.

*Distill'd
with Blood
stone.*

Sal Armoniack Distill'd with an equal quantity of Blood-stone, produces a Urinous Antiepileprick Spirit, and Yellow flowers which are somewhat Aromatical. If we take their Solution and Tincture in Spirit of Wine, by filtration and evaporation, we obtain a yellow Salt of an Aromatical Smell, which melts into a gold colour'd Odoriferous Liquor, that is given to twenty drops as an Excellent Cordial, and an Incomparable Remedy against Vapors.

*its fix'd A-
romatick
Salt.
Its Distilla-
tion with
Lime.*

Sometimes in making a Volatil Spirit of Sal Armoniack, we mix it with Lime. And the Spirit thus prepar'd is much the same as the others. It makes no *Cogulum* with Spirit of Wine, like that prepar'd with Salt of Tartar. This I take it is a convincing proof that the Lime has either furnish'd it with an Acid, or else has not subdu'd all those of the Sea Salt. And therefore the Acids of the Spirit of Wine, not meeting so deep an Alkaline Spirit, cannot act so forcibly against it.

*Lime of
Spirit of
Wine has
Acids.*

*Chalybeat
flowers.*

If we Sublime Sal Armoniack with Steel, we have the Chalibeat flowers. But they are not much worth, because the Acid of the Sea Salt incounting the Steel, becomes a Vitriol. However they are aperitive;

aperitive; but not very Volatil, by reason that when the Acid of the Sea Salt is drunk up, the Volatil part flies off and Leaves the flowers in a more fix'd condition than they ought to be. As for *Ens Veneris* I believe the Virriol do's not Absorb so hard as the Steel, and therefore the Flowers retain more of their Volatil Substance.

After the Distillation of Sal Armoniack with A Fix'd Tartar, take the remainder, dissolve it in Water, filter *Sal against* the Solution, and by evaporation ye'll obtain *fevers*. a fix'd Salt, consisting of the Salt of Tartar and Sea Salt. 'Tis a good Diuretick, and useful in fevers. Dose from ten to thirty grains.

Take the Remainder of the Blood stone, distill it *The Acid* thro a Retort, and you have a yellowish Spirit *Spirit of* which is softer than the Spirit of Salt, and may be *Sal Armoni* us'd inwardly as a Diuretick. It Dissolves Gold *niack*. Leaf.

If ye mix sixteen Ounces of the Spirit of Nitre, Aqua Re- with four Ounces of the Spirit of Sal Armoniack, *gia*, they make an *Aqua Regia* which dissolves Gold. When the Sal Armoniack is dissolv'd by a gentle heat, and the Volatil Spirits evaporated, there will not remain in all above seventeen Ounces:

Mix Three drams of the Volatil Spirit of Sal Ar- *A Mixture*. moniack with *Tartarum Foliatum*, they'll joyn together and make an admirable mixture against Hypochondriacal Melancholy. It may be us'd just as *Elixir Proprietatis*.

The Mineral Sudorificks, some of 'em, are only *Mineral* absorbent. Such are Seal'd Earth, Chalk, Earth *Sudorificks*, of Malta, &c: Others are Oily and Volatil, as Amber, Unicorn Mineral, and Jeat; others again have metallin parts, for Instance, the Preparations of Antimony, Mercury, Gold and Steel.

Seal'd Earths are of several kinds. Mr Grew has *Seal'd* observ'd that Acid Spirits will not ferment with *Earths*. Bole Armoniack, nor with some sort of Seal'd Earth; yet they raise a very sensible fermentation upon what we call Lemnian Earth, whence one would think it should be more absorbent. *Ludovic* cries up the Silefian

Sileſian Earth, and ſays we ſhould make uſe of no other, becauſe it is impregnated with Metallick Particles of Gold or Steel.

Chalk.

White Chalk, is almoſt of the ſame cur. 'Tis Abſorbent and deſtroys Acids. It procures a copious inſenſible Tranſpiration. All theſe Earths are given from one to two ſcruples, ſometimes to a dram. All Preparations upon them are uſeleſs. For Lotions can only ſeparat the Active parts. Irrorations taint 'em with foreign Qualities. And if the Liquor be Acid, they turn into Allum or Vitriol. Diſtillation can fetch little out of 'em. However, ſome pretend to draw a Spirit from Sileſian Earth, and give it to ſome drops in Malignant fevers: Schroder infuſes that Earth with Rain-Water, and draws off the Water; then he diſtills the Oylly Remainder with Spirit of Wine; and ſo, as he ſays, a yellow Oyl will Swim upon the Spirit; which muſt be ſeparated and given in ſome Vehicle, to fix or ſeven drops in the ſmall Pox and Malignant fevers.

Emeralds.

Emeralds ground Small on a Marble ſtone, are given from fix Grains to half a dram; They are much eſteem'd in Epilepsies, Loofeneſſes, Dyſenteries and Malignant fevers.

Jacynth.

Jacynth and *Chryſtal* prepar'd are Abſorbent, Sudorifick, Cordial, and good againſt the *Cholera Morbus*. Doſe the ſame as that of *Emeralds*. *Chryſtal* is ſometimes given to Nurſes to procure Milk.

Mineral Ivory.

Mineral Unicorn or Ivory is a good abſorbent. It abates the Heat of Malignant Fevers. 'Tis good againſt the Whites, Piles, and all Diſeaſes ariſing from an Acid; as containing oylly and abſorbent Particles. Doſe to a dram.

Jear, is a ſtone tainted with Bitumen; 'tis ſeldom given Inwardly. 'Tis hard and cruſty, and burns like Pitch. Some recommend a dram of the Powder againſt the Colick. *Actius* kindles it, and then quenches it in ſome proper Liquor to be uſ'd, as a Cordial. Its Oyl is uſ'd Externally, as an Anti-hyſterick, or if ye rectifie it with common Water ye may exhibite fix or ſeven Drops. In Epilepsies,
Con-

Convulsions, Suffocations of the Womb, the Gout, &c. Ye had best dissolve it with a little Sugar in some convenient Vehicle.

Amber and Sulphur I pass over. The one shall come in with Hysterical Medicines, the other with Pectorals. Either of them may be given to a dram in substance, being first well beaten. The Rectified Oyl of Amber may be given to fifteen Drops, and its Volatil Salt to twenty Grains. *Amber and Brimstone.*

There are several Sudorifick Preparations of Antimony described above. Those I shall not insist upon. There are others behind, which are now to be accounted for. In the first place we must call to mind that the more Nitre is mixed with crude Antimony, the more it forfeits its Emetic Vertue, and becomes Diaphoretick.

Antimony affords some fixed Flowers which are Diaphoretick. We boyl Diaphoretick Antimony in Water, filtrate the Decoction, and throw in a little Distill'd Vinegar to precipitate the Diaphoretick Parts. They are given to fifteen Grains. *Fix'd flowers of Antimony.*

Take two Ounces of *Crocus Metallorum*, pour upon it twelve Ounces of the Spirit of Nitre. Stop the Vessel very close, set it in a *Balneum Mariae*, and let it stand a long time till the Dissolution be accomplish'd. Then draw off the Spirit of Nitre, and wash the remaining Powder, for a Diaphoretick Precipitate. It procures Sweat, being given from four to twelve Grains. *Its Diaphoretick precipitate.*

Thus far we see, Nitre and the Spirit of Nitre Rob the Antimony of its Emetick Qualities, and render it Diaphoretick.

Take eight Ounces of Antimony in Powder, let it digest Six Months with twelve Ounces of the Oyl of Vitriol, then distill the Mass in a Retort. In the Receiver and about its Neck, you'll find an Ounce of good Sulphur like Brimstone, which is very Diaphoretick. Dose to half a Dram. If ye joyn this Sulphur to an equal quantiry of Sal Armoniac and as much Quicklime, and then distill all in a Retort upon Sand; ye'll have a Red Tincture dissolvable. *Its distilled Sulphur and Tincture.*

solvable in any Liquor; 'tis given to a scruple for procuring of Sweat. We may try the same experiment upon common Brimstone.

Poterial's
Antibec-
rick.

Poterial his *Antibecrick* is made thus. Take equal parts of Antimony and Tin, reduce them to dross and mix them with a triple quantity of Nitre. Then detonate them in a Crucible. This Medicine operates as Diaphoretick Antimony.

Diapho-
retick Steel.

Dissolve the steeld Flowers of Sal Armoniack in Water, filtrate the Solution, add to it Oyl of Tartar. 'Twill give a sudorifick Precipitat, call'd Diaphoretick Steel. Dose from four to fifteen grains.

As for the Sudorifick Preparations of Mercury, I am of Opinion, that the Natural or Artificial Cinabar, or that of Antimony are much preferable to all others.

A List of SUDORIFICK Medicines.

R O O T S.

OF Burdock,
Sarsaparilla,
China,
Gentian,
Zedoary,
Valerian,
Angelica,
Masterwort,
Avens,
Swallow-wort,
Viper-grass,
Meadsweet.

From one Ounce to an Ounce and an half to every quart of Water, by way of Pilsane: In substance from a dram to two drams, exhibited either in Electuaries or in liquid Vehicles.

W O O D S.

Of Guajacum,
Boxwood,
Sassafras,
Juniper,

From one to two Ounces to a quart of Water, in Decoctions.

BARKS.

BARKS.

Gusjacum,
Cinnamon.

} In substance from half a
dram to a dram. In De-
coctions six drams to a
quart of Liquor.

LEAVES.

Carduus Benedictus,
Scabicus,
Baum,
Meadsweet,
Golden Maiden-hair,
Speedwell,
Ground-Ivy,
Tansy,
Germander,
Water Germander,
Wild Marjoram,
Penny Royal.

} By handfulls in Pissanes.

FLOWERS.

Of St.zechas,
Wilde Poppies,
Yellow Poppies,
Rosemary,
Gillyflowers.

} By Pugils in Decoctions.

Saffron in substance to two Scruples.

BERRIES.

Bay berries Infused in Wine to two drams.

*Juniper berries boyled in Water, or Infused in Wine
to three drams.*

SEEDS.

Of Columbines,

Fennel,
Carrots,
Anis,
Caraways,
Hartwort,
Bishops weed,
Carduus Benedictus.

} In Powder from half a
dram to a dram. In Infu-
sion to two drams. In Pti-
sanes by Pugils.

GUMS

GUMS and ROSINS.

*Camphir dissolved, or in an Electuary, to fifteen Grains.
Myrrh to two Scruples.*

Opium from half a Grain to two Grains.

Frankincense in substance to a Dram.

Sorax in Drops to a Scruple.

Benzoin drops from three to four Grains.

ANIMAL REMEDIES.

Prepared Crabs Eyes,

Boars Teeth in Powder,

Jaw bones of Pikes pulveris'd,

Prepar'd Harts-horn,

Prepared Ivory.

Mules dung mix'd with Wine or a glass of Sudorifick Waters.

Pigeons dung pulveris'd in Wine to a dram.

Castor pulvers'd from half a dram to a dram.

Bezoar Stones to half a dram.

Mans Gravel stones from fifteen to forty grains.

Sal Armoniack from ten grains to two scruples.

MINERALS.

Silesian Earth,

Lennian Earth,

Bole Armoniack.

Prepared Chrystal,

Chalk,

Emeralds,

Jacinth.

Mineral Unicorn from fifteen grains to half a dram.

Prepared Amber from a scruple to a dram.

Feat to a dram.

Natural Cinnabar from fifteen grains to half a dram.

CHYMICAL MEDICINES.

The Volatil Salts of

Harts-horn,

Mans Blood,

Vipers,

Amber,

Tartar.

From four to fifteen grains,

Chap.VII. Of Sudorificks and Diaphoreticks. 255

The Volatil Spirit of Sal Armoniack, and all others drawn from Animals, from eight to thirty drops.

DISTILLED OYLS

Of Cinnamon,
Clove Gillyflowers,
Thyme,
Rosemary. } From two to six drops.
Of Amber to twelve drops. } dissolved in any Liquor.

EXTRACTS

Of Guaiacum,
Cardus Benedictus,
Juniper,
Angelica, &c. } From a scruple to a dram.

SPIRITS

Of Wine Camphoris'd,
Juniper,
Cresses,
Golden Maiden hair. } From two to six drams in
Potions.

WATERS

Of Cardus Benedictus,
Meadsweat,
Scabious,
Masterwort,
Baum,
Walnuts, &c. } From two to six Ounces.

Of Cinnamon,
Venice Treacle. } From two drams to an
Ounce in any Liquor.

Sudorifick Water of Vipers from two Drams to six.

Bezoar Mineral from ten to thirty Grains.

Diaphoretic Mineral from ten to thirty Grains.

Pix d'flowers of Antimony from five to twelve Grains.

Poteries's Antibedtick from ten to thirty Grains.

Flowers of Sulphur to half a Dram.

Tincture of Antimony from six to fifteen Drops.

Diaphoretick Steel from four to fifteen Grains.

Fulminatory Gold from two to eight Grains.

Cinnabar of Antimony from ten Grains to a Scruple.

Natural Cinnabar to thirty Grains.

Common

Cymmon Cinnabar to fifteen Grains.

Flowers of Benzoin from two to ten Grains.

Its Tincture to fifteen Drops. Its Magistery to ten Grains.

FORMS of Sudorifick Recipe's.

An Elixir of Juniper good against Colicks, gnawings of the Stomack, Scurvey, Gravel, &c.

Take a convenient quantity of Juniper berries, beat 'em a little Coarsely, pour upon them the Distill'd Water of Juniper berries, strain the Liquor hard through a Linnen Cloth, and thicken it to the Consistence of Hony, and mix twelve Spoonfuls of it with Brandy in which other Juniper berries have been insus'd. Keep all in a very moderat equal beat: And so ye have a Tincture or Elixir. Dose, a Spoonful.

An Extract of Juniper good against the Plague, Malignant Fevers, &c.

Take Juniper berries in coarse Powder; pour upon 'em the ardent Spirit of other Berries prepar'd by Fermentation and Distillation. Let 'em digest together some time. Then strain out thro a Linnen Cloth, and evaporat gently. Dose from fifteen Grains to half a dram.

A Sudorifick Tincture.

Take Myrrh, and the fix'd Salt of Tartar, of each a dram; Camphyr, two Scruples; Pour in upon 'em Eight Ounces of the Spirit of Wine. Let 'em digest together in a Vessel well stop'd upon a fire of Sand, till the Spirit assume a deep colour; that is, about the Space of five or six hours, the Glass being shak'd now and then. Dose, from a half a dram to a dram in any Liquor.

Sudorifick Snow of Antimony.

Melt the Regulus of Antimony in a crucible cover'd with another; keep it Liquid for some time. 'Twill sublime white flowers, which ye must separat from the yellow ones that accompany 'em. These white flowers are given

given to twenty Grains. They procure Sweat, and are not at all Emetick, unless they meet with some Acid in the Stomach. They're call'd the Snow of Antimony, and are Entitled to the same Vertues as Diaphoretick Antimony.

A Sudorifick for Pestilential Cases.

Take five Ounces of the Water of Butterbur, a dram of Venice Treacle, ten Grains of the powder of Vipers. Exhibit it to the Patient, and cover him up.

A Sudorifick in the Small Pox.

Take Carduus Benedictus Water, and Baum Water, of each two Ounces; Powder of Vipers, twenty Grains; Syrup of Red Poppies, and of Clove Gilly-flow-ers of each half an Ounce; make a Potion, and cover up the Patient upon taking it.

A Sudorifick against Inveterate Loosenesses.

Take Brandy an Ounce; Wine two Ounces; fresh Venice Treacle, half a dram; Shavings of Harts horn and Seal'd Earth, of each a Scruple: make a Potion.

An Elixir Proprietatis prepar'd by Distillation, being Aperient and good against Vapors.

Take half an Ounce of Tartarum Foliarum. Besprinkle it with three drams of Volatil Spirit of Sal Armoniack. Add Saffron, Myrrh, and Aloes, in powder, of each two drams. Pour in ten Ounces of the Spirit of Wine, and set 'em in a cold digestion in a Vessel stop'd close, for four and twenty hours. Distill and Cohobat with an Alembick. Dose from one to two drams in some convenient Vehicle.

A Sudorifick Pfisan for Venereal Diseases.

Take Guaiacum wood, Sarsaperilla, of each an Ounce; crude Antimony pulveris'd, an Ounce; Crude Mercury, half an Ounce. Boyl all in an unvarnish'd Earthen Pipkin with six quarts of Water, till two be wasted. Take a quart every Morning before you Rise, in three different draughts, keeping the interval of half an hour betwixt one and s'other. Then keep your self warm.

S

A Su-

A Sudorifick in a Pleurisy.

Take Horse or Mule Dung, steep it in a glass of Wine; pour off the Wine and drink it in the Morning fasting, or at least see that ye eat nothing for two hours before and after taking it.

Sudorificks for the bites of Venomous Creatures.

Take of the Volatil Salt of Vipers, fifteen Grains; Venice Treacle, half a dram; Water of Carduus Benedictus and of Butterbur, of each two Ounces; Syrup of Cinnamon, half an Ounce.

A Sudorifick Clyster.

Take a dram of Camphyr and dissolve it in half an Ounce of the Distill'd Oyl of Juniper. Mix all with an Ounce of the Syrup of Stachas, and a sufficient quantity of the Decoction of Sage, Marjoram, and such like.

An Emulsion.

Take two drams of Columbine Seed, half a dram of the Seed of Carduus Benedictus, and two Scruples of Bezoar Mineral dissolv'd with an Ounce of the Syrup of Clove-gilly-flowers, half an Ounce of the Syrup of Cinnamon, four Ounces of Mead-sweet Water, and the like quantity of Baum Water. Make an Emulsion for two doses.

An Opiat.

Take a dram of the Extract of Juniper, a dram of the Extract of Baum, two drams of Crabs Eyes, a dram and half of prepar'd Amber, two Scruples of Myrrh in Pouder, half a dram of the Volatil Salt of Hartshorn, four Scruples of Tartarum foliatum. Incorporat all with the Syrup of Clove Gilly-flowers. Dose from two Scruples to a dram and a half.

Another Opiat.

Take the Roots of Angelica, Contrayerva, and Master wort, of each a dram; Saffron, Mace, of each half a dram; Extract of Carduus Benedictus two drams dissolv'd in the Ardent Spirit of Juniper, Camphyr a Scruple mix'd with a dram of the clear Oyl of Amber,

Amber. Mix all together with a sufficient quantity of the Syrup of Poppies. Dose from one to two Scruples.

A Diaphoretick Syrup.

Take an Ounce of *Angelica Roots*, as much *Masterwort Roots*, a handfull of the *Leaves of Ground Ivy*, half a handfull of *Juniper berries* bruis'd, Boyl all in three Pints of *Water* till the half be consum'd, then strain the Decoction, and with a Pound and a half of *Sugar* boyl it up to the Consistence of a Syrup; adding towards the end Tincture of *Saffron* and that of *Amber*, of each a dram; Dose from one to two Ounces in Potions.

Salts.

Dissolve fifteen grains of *Sal Armoniack*, in three spoonfuls of *Water*. And at the same time dissolve fifteen grains of the Salt of *Tartar* in other three spoonfuls. And Drink up the one after the other.

A Julep.

Take four Ounces of *Mead-sweet Water*, half a dram of the Powder of *Vipers*, half an Ounce of the ardent Spirit of *Juniper*, and an Ounce of the Syrup of *Clove-gilly-flowers*, make a Sudorifick Julep.

Minderus his Diaphoretick Powder against Malignant Fevers.

Take three drams of *Sugar Candy*, two drams of white *Ginger*, and a dram of *Camphyr*. Mix all and make a Powder. Dose a dram to be taken in three Ounces of some Sudorifick Water.

Another from *Riverius*.

Take three drams of *Mineral Bezoar*, two drams of *Salprunel*, a dram of *Camphyr*. Dose, a dram to be taken in the Water of *Carduus Benedictus*. This Powder is less offensive to the Head, and do's not fret the Blood so much as i'other.

The Ardent Spirit of *Juniper*.

Take half a Pound of *Juniper berries* bruis'd; Besprinkle 'em with a Pint of warm Water, and half an Ounce of Test. Put all into Digestion in a close Vessel upon some warm Place, and then Distill. 'Tis given from half an Ounce to two Ounces in some Liquor.

A Sudorifick against Vomiting, Peripneumonia's and Pleurifies.

Take half a dram of the Extract of Juniper, half a dram of Diaphoretick Antimony, ten grains of the Volatil Salt of Hartshorn, an Ounce of the Syrup of Red Poppies, six Ounces of Poppy Water. Make a Potion for two or three doses.

CHAP. VIII.

Of Anti-Diaphoreticks.

NOrwithstanding that Diuretick and Diaphoretick Remedies are near a kin to one another, yet the Antagonist Remedies that cause the reverse of one Evacuation, will sometimes promote the other. For instance, Acids often times stop an excessive sweating, but at the same time promote Urine.

Purgatives and Emeticks oftentimes check immoderate sweating, by diverting the Humours to another Channel. For the serum being plentifully voided at one door, the Croud will lessen at the other.

Diseases attended by copious Sweats.

After Fevers we frequently meet with immoderate Sweatings, because the parts of the Blood have been much disunited and separated by the preceding fermentation. In Phthisicks and after an indiscreet usage of attenuating Medicines, we may observe the same Consequences.

All the Remedies that Cure this Symptom are such as give a good consistence to the Blood. Such are Milk, Gum Tragacanth, Tortoises, Crabs, Frogs Spawn Water, the four Cold Seeds, Almond Milk, Barly Water, Water Gruel, and in general whatever we call Incrassating. Another occasion will oblige me to take a narrower View of this rank of Medicines; therefore I shall avoid particulars in this place.

Some-

Sometimes we imploy Nitrous Medicines which serve to re-unite the Oyl and Serum of the Blood, that are supposed to be parted. Accordingly the Salt of Nitre, Sal prunel, &c. are recommended on this occasion.

To conclude, Absorbents sometimes subdue the Ferments that fret the Blood, and consequently are good against this Symptom. Such are Crabs Eyes, Coral, Ivory, Crocus of Steel, &c.

'Tis needless to insist longer on the manner in which Anti-Diaphoretick Medicines display their Vertues : many of them are already touched upon ; and the others shall be brought in upon other occasions.

A List of ANTI-DIAPHORETICKS.

Emeticks
Purgatives

A B S O R B E N T S.

C	Crabs Eyes,	}	From one to two Scruples.
	Coral,		
	Seal'd Earth,		
	Chalk,		

O Y L Y M E D I C I N E S.

The seeds of Melons,	}	From a dram to two drams, by way of E- mulsion.
Citruls,		
Cucumbers,		
Pumpkins,		
Lettuce,		
Purslain.	}	To half an Ounce.
Sweet Almonds,		
Kernels of Cherries.		

Increasfing Ingredients.

Crabs in Broth.
Tortoises by way of Syrups or Decoctions.
Veal Broth.
Gum Tragacanth to two Scruples.
Gum Arabick to a dram.

Barly,
Oatmeal,

} By handfuls in Decoctions.

S A L T S.

Nitro,
Sal prunel,
Cream of Tartar.

} To a dram in Pisanes.

A C I D S.

Juice of Citrons,
Spirit of Nitro,
Vitriol,
Sale.

} In Pisanes to an agreeable Acidity

N A R C O T I C K S.

Poppy beads half a handful in Decoctions.
Laudanum a Grain.

The FORMS of Recipe's

An Emulsion.

Take half an Ounce of the four Cold Seeds, pour upon 'em half a pint of Lettuce Water: Adding, while ye beat the Seeds, an Ounce of the Syrup of Lemmons.

A Powder.

Take a Dram of refin'd Nitro, and a Dram of Tartar Vitriolated, mix all together. Dose, half a Dram at a time.

A Julep.

Take four ounces of the Water of Frogs Spawn, dissolve in it half a dram of seal'd Earth, and an Ounce of Syrup of Violets.

C H A P. IX.

Of Fluxing Medicines

Masticatoria.

When we make use of Masticatoria or Chewing Med'cines we void more spittle than ordinary. The Reason of the Consequence is this. In

In chewing we move and contract the Muscles that surround the Spitting Glandules. And besides, the Med'cines employed in this service are stock'd with Volatil Salts, which provoke and open the Vessels that contain the Liqueur. Perhaps these subtil particles of the Med'cines do likewise rarify and prepare the humor for an easy exit. In this Catalogue, we reckon up Pellitory of Spain, Ginger, Mustard Seeds, Long Pepper, Japan earth or Carechu, Annis seed, and Fennel seed, and above all Tobacco.

There are others of this Rank which furnish no sharp particles; whose Operation depends entirely upon the motion of the Muscles. For instance, a ball of Christal, a piece of Spanish Wax, Mastick, &c. The rolling of these in the Mouth, will cause a copious Spitting. *The Difference of Chewing Med'cines.*

A third Sort of salivating Med'cines, are what we call *Apophlegmatismi*, that is, sharp Liquors which tickle and open the Salivating Vessels. In former times all these Remedies were much in Vogue, for Curing the disorders of the Brain. 'Twas then presum'd that the Brain discharg'd its Serosity through the holes of the *os Sphenoides* into the Palate. But now that we are undeceiv'd of that mistake, they are brought under disrepute, and their frequent use is condemn'd by Physicians, by reason that the Spittle being the dissolver of Victuals should not be too prodigally wasted, lest digestion suffer by it. And in confirmation of this thought, we see those who are much given to these Remedies, do generally become dry and lean.

But after all there are some diseases where they are very serviceable. I know several Persons that by chewing Tobacco, have been freed from insufferable Head-acks, Rheumatisms, Scrophulous Diseases, &c. I Grant, Tobacco is very disagreeable, and I think it were not amiss to shift it for somewhat else.

While Persons are in health I would not advise 'em to smook Tobacco, because it fetches out too much

much spittle. But when they are attack'd by Diseases arising from the Acidity of the Lymph, then this way of using Tobacco may furnish them with a powerful Corrective, by reason of the sharp Salts that Medicine contains. But then it must be used as a Medicine, and not as ordinary food, else it forfeits its Medicinal Vertue. Moreover Tobacco possesses somewhat that's very corrosive; and accordingly its Oyl put into a Wound will occasion mortal Convulsions. I have seen the experiment try'd. That is; if ye cut a Wound in a Dogs Thigh, and fill the Wound with Tobacco; 'twill cause Violent purgation both upward and downward, with mighty Convulsions.

A Salivation.

Some diseases may be cur'd by salivation. But then 'tis not properly the spittle that flows out so plentifully. 'Tis the whole body of the Humours crouding that way, which otherwise are set off by stool, Urine, and Sweat. Mercury is the mighty Champion that produces this effect. And 'tis used with success in the Pox, Epilepsy, Malignant scab, Ringworm, Leprosy, some Gouts, some Pocky Ulcers, Nodes, Swellings upon Bones, &c.

Several ways of Fluxing.

The ways of using it are Various. Some use it by way of Plaisters, others in Ointments; some give it in Pills, others by way of Fumigation. Plaisters are now a days in disuse, because they cramp and tie up the Mercury. However tho' they are not so proper for Fluxing, yet they are very useful for Nodes, &c. Ointments are more common. They are made up of an Ounce of Turpentine, half a Pound of Mercury, and three of Hogs fat.

The quantity of the Mercury may be lessen'd or enlarg'd at pleasure. The first day we anoint to the middle of the Leg; the second we come up to the Knee and middle of the Thigh, following the course of the Vessels on the inside. If we perceive no

The way of anointing.

disposition to flux upon these inunctions, We rub the Back bone; but we do not use above two Ounces of the Ointment the first time; afterwards we

we may rise to three Ounces, and sometimes to four, when the Ointment is not very strong of the Mercury. That is, we must not use above half an Ounce of the Mercury at a time. When we anoint, we place the Patient in a warm Chamber near the fire, and afterwards put on him drawers and Linnen Stockings, and so keep him in Bed.

Before we anoint we prepare the Patients Body *The Body prepar'd.* by feeding him with Veal Broth, Fowl, and cooling Herbs, injecting Clysters, purging him with Cassia and Whey, sometimes with the Compound Syrup of Apples, and some Drams of Senna boyl'd with the Cassia in Whey. We may likewise exhibit Ptisanes of Succory Roots, Quitch-grass, &c. Then we Blood 'em once or oftner, according as we see it necessary; afterwards we bathe 'em twice a day, for Eight days together, keeping them in the Bath at least two hours every time. In short, to prepare their Bodies we moisten and supple the pores, and qualify the sharp Salts in the Mass of Blood, before we anoint 'em. Previous purging clears the Guts, and prevents the disorders the Mercury might occasion in their Glandules. For sometimes when we begin to anoint, the Patient is troubled with gripes, and their belly is loose, because the Mercury separates the Lymph in the Glandules of the Guts. Bleeding empties the Vessels, and gives the Mercury scope to rarify the Liquors, without grating too much upon the solid parts.

We ought to have a careful Eye upon the Mouth, and observe when it begins to stink, or become white, when the Tongue swells and the Gums and Palate are ulcerated; for then we discontinue the anointing, especially, if the Patient begin to spit. Above all, we must take care that the Head and Throat do not swell too high.

We may anoint twice in one Day, providing nothing appears. If a Looseness or copious flux of Urine happen, we must not carry the Fluxing design too far, because these evacuations may fetch out the Venereal ferment as well as a Salivation. Indeed the

the Patient is more weaken'd and shatter'd by them, than by the Fluxing: Because the pores of the Glandules in the Guts and Kidneys are so small, that the Lymph must be melted extream thin before it gains a passage. Whereas those in the Mouth, which continually cast out large quantities of thick Liquor, these I say are more patent and do not require such a laborious preparation, of the Lymph.

At most we should not anoint above six times. But we may promote the Fluxing or other evacuations by giving inwardly the *Panacea* of Mercury. The first Day we may give ten Grains; the next fifteen, the next to twenty, and so on till we come to thirty Grains, or till the evacuation arrive at its due pitch; providing still we have a due regard to the strength of the Patient.

Sometimes if we keep the Patient too hot the Mercury does not enter the Body, because the fat in the Ointment melts and so the Mercury falls off. Sometimes tho all Circumstances be duely accounted for, yet the Fluxing will not succeed by reason of some Obstruction in the spitting Glandules. In that case we order 'em to chew Wax and Mastick, that the motion of the chewing Muscles may invite the humors to that quarter. If the Spittle be too thick and tough we may exhibit Med'cines stock'd with Volatil Salts. If we give the *Masticatoria*, they must be ty'd up in a Bag, or else infus'd in some Liquor, and so converted into a Liquid Med'cine.

During the time of Salivating, we feed the Patient with Eggs and Broth, and cooling Ptisanes. To facilitat the Evacuation of the Spittle, we must often wash the mouth with some Syrup mix'd with the Pilsane, or some Vulnerary Decoction and Hony. In the mean while let the Patient keep himself warm in bed.

*How to stop
a violent
Fluxing.*

If the Salivation overbear we must turn it off with Clysters, and Bleeding. If the Patient be weak we must give Cordial Potions, and exhibit a few Grains of Fulminatory Gold by way of an Opiat in a litle of the Conserve of Alkermes.

Common.

Commonly the Patient should spit about two Pound a Day, sometimes more, sometimes less.

After twenty Days, the Salivation should draw towards an end; the Spitte not being so fetid as formerly, because by that time the Mercury is almost gone. If it do not stop about this time, we must purge the Patient; and wash his Mouth with Gargarisms of red Roses, Allum, and Hony of Roses. Then give him Soupe to eat, allow him to take the Air moderately, and so by degrees bring him to his ordinary way of living.

During the Salivation several accidents may happen, which the unwary Surgeons that take 'em in hand would do well to look to. If they consulted Physicians upon such occasions, we should not meet with so many unlucky consequences, which are occasion'd by a bad Conduct, or unseasonable timing of things.

A Salivation cures the Pox in this manner. The Mercury parts the fibrous particles of the Blood, and gives the serum and Lymph an opportunity of sheer-^{How Mer-}ing off: And then whatever Liquor comes into the Blood may easily suck up the Salt of the fibrous part, ^{cary carries} those of the Serum and Lymph being out of the way. ^{off Vene-} When I come up to the Venereal Diseases I shall ^{real fer-}insist longer upon this Subject. ^{ments.}

Sometimes we do not anoint, but exhibit the white precipitat, sweet Mercury, and ^{Other ways} Panacea, of Fluxing. in order to Salivate. The Panacea is the safest and most inoffensive Preparation. We may give the first day fifteen Grains, the second twenty, the third five and twenty, and so on till the Fluxing commence.

Sometimes we Flux by fumigations at the Mouth and fundament. We throw some troches of Cinnamon and Benzoin upon burning Coals, and receive the Smoak with a funnel. But this method is uncertain.

If the Patient has not the conveniency of confining himself to his Bed for five and twenty or thirty ^{An inter-}Days, we may Flux him at the rate of two Hours ^{rupted Sa-}livation.

a Day, by ordering him to take a Pill of white Precipitat, and melt it under his Tongue, or by receiving the Smoak of the troches of Cinnabar at the Mouth. But none of these methods is so sure as that of anointing or giving inwardly the *Panacea*, or sweet Mercury or white precipitat. Some make use of the red precipitat, but to my fancy 'tis too corrosive. As for the other precautions which are to be observ'd before the commencement of the Salivation; they depend upon the Season, Age and circumstances of the Patient; and therefore I omit 'em.

*The Effects
of Mercury.*

Perhaps 'twill be more necessary to touch upon the manner in which Mercury produces these effects. 'Tis Certain Mercury rarifies the Blood and humours, and sets 'em a moving; by reason that, 1. It is of it self very apt and qualified for motion. 2. It imbibes the Acids it meets with, and so the Sulphur of the Blood is rescu'd from their Clutches. This we see Verified by its softning of hard Tumours, and the quicker Pulse that attends persons under a Salivation.

Being then that Mercury rarifies the Blood and drinks up the Acids, 'tis no wonder it should occasion the swelling of the Head and Throat. For the Blood being rarified naturally mounts upward, where Mercury finds no sufficient door of escape, but the spitting Glandules. Therefore it strains it self there, and being impregnated with the Venereal Acids and sharp Particles of the Blood, Ulcerats the Mouth. Upon which all the humours repair thither. At the same time something may be strain'd out by the Glandules of the Guts; but by reason their Capacity is much narrower than that of the spitting Glandules, and that the Blood sends most of its force upwards; upon these accounts the Guts are only grip'd a little and so quit. Put the case that the Glandules of the Guts were large and those of the mouth small, the humours would croud into the Guts, and a plentiful Evacuation by stool would give the Cure of the Disease. Now this does sometimes happen. And 'tis upon this account that when

we

we desire to avoid a Salivation, we second the Mercury with Purgatives, and precipitate the humors to the fundament.

The quantity of the humors that ought to be voided in Fluxing, cannot be absolutely determin'd. About two Pound a day is the common Gage: However we may promote or check the Evacuation as we see occasion. Neither can the duration of the Salivation be determin'd: The best way is to continue it till the spittle loose its strong Smell.

The anointing of a healthy Man will raise a Flux upon him, no less than that of a Pocky Person. And 'tis possible the stinking humors voided on such occasions, are the nutritious juices corrupted by the Mercury. For this reason we see some Persons have been Flux'd three or four times for the Pox, and yet were never Cur'd; the Venereal ferments were not voided with the humours, perhaps because they were not fit to incorporate with the Lymph or watry Vehicles. Under the head of Venereal Diseases I shall point at the distinguishing marks of a Pox curable by Fluxing, and those of that sort which requires another Method.

'Tis surprising to consider the stiffness and obstinacy of some People. If they see a hard chancre, or a few Venereal wheals without either nodes or Exostoses, they'll presently throw the Person into a Salivation. And after he has gone through all the steps of their cruelty, he finds himself just as he was.

Now if these Pretenders would but treat their Patient at a gentler rate, by exhibiting preparations of Mercury interlin'd with Purgatives and Sudorifics; they might compass the cure without putting 'em to any inconvenience. This Subject I purpose to pursue at due Length, in the Chapter of Venereal Diseases.

A List of FLUXING Medicines.

CHEWING MEDICINES.

W*ax,*
Pieces of Crystal,
Mastick,
Pellitory of Spain,
Ginger,
Mustard Seeds,
Fennel,
Aniseeds,
Liquorice,
Tobacco.
Lozenges of the Panacea chew'd.

EXTERNAL MEDICINES.

Mercurial Ointments rub'd upon the Parts.

Mercurial Plaisters.

Steams of Cinnabar receiv'd at the Mouth, or fundament.

INTERNAL MEDICINES.

Sweet Mercury from fifteen to thirty Grains. Repeated several times.

Panacea from ten to forty Grains.

White Precipitate from four to ten Grains.

FORMS for Recipe's.

Troches for Fumigation.

Take an Ounce of Common Cinnabar well powdered. Mix it with two drams of Liquid Storax, and half an Ounce of Mastick dissolv'd with Spirit of Wine. Make a Mass. Divide it into four Portions. Dry 'em. Throw one at a time upon burning Coals, the Patient being plac'd upon a close stool or otherwise to receive the fumes.

Tro-

Troches of the Panacea.

Take an Ounce of the Panacea well pounded, Wash it with Spirit of Wine. Incorporat it with a very small quantity of Gum Tragacanth dissolv'd in Rose Water.

C H A P. X.

Of Remedies which stop a Salivation.

Fluxing Medicines, especially Mercurial Inuncti- Disorders ons, may cause an infinity of Disorders. Some- attending times the Swelling of Head and Throat kills the Pa- Salivation. tient ; sometimes he becomes Paralytick : sometimes he looses his Teeth ; but that is the least of all the Inconveniencies. As for the Remedies which serve to redress these Disorders, they are either Calculated for keeping the Salivation even, or for defacing the impressions it has left.

If we want to stop the Salivation we loosen the *How to stop* Belly, unload the Vessels, and turn the Humour off a *Salivati-* by Purgatives, We give the Patient a peice of Gold on. into his Mouth to inbibe the Mercurial Vapors ; and at the same time order him to make use of Astringent Gargarisms of the Decoction of Roses, Pomgranat Flowers, Rock Allum, Syrup of Mulberries, &c.

If the Disorders be occasion'd by a Mercurial Inunction, they are more obstinate than those from the other ways of Fluxing. For the Crude Mercury penetrating through the body may remain in the Nerves, Flesh and Bones ; where it unrips the Texture of the parts, and hinders the Circulation of the Nutritious Juices. We have a thousand Instances of this unhappy Consequence. All the Relief that Art affords upon this occasion, Rites no higher, than to put the Blood in Motion, and promote the transpiration of the Mercurial Particles. After that, Nature must of her self retrieve the shatter'd Parts, All

*The use of
Sudorificks.*

All Sudorificks are qualifi'd for promoting Transpiration. But there are some whose parts are peculiarly correspondent to those of the Mercury, and consequently fitter to Entertain 'em. Among others fulminatory Gold is much esteem'd. In making it we dissolve Gold in *Aqua Regia*, then we pour in common Water, and afterwards the Oyl of Tartar *per deliquium*. Thus it precipitars a Golden Poulder which we wash and dry under the name of fulminatory Gold. It procures Sweat; being given from two to six Grains in some Conserve. The Gold is soften'd by the Mercury, and becomes fit to receive and carry out its Particles, especially since 'tis made Diaphoretick by the addition of the Salts.

Next is the Volatil Spirit of Sal Armoniack or Urine, given from half a scruple to two scruples in any Sudorifick Water. It is very serviceable in pushing out the Mercurial Particles that stick in the Solid parts.

*Spirit of
Urine.*

The Volatil Spirit of Urine is made by evaporating Urine to the Consistence of Hony, in a Cucurbita upon a fire of Sand, and then putting a Head and Receiver to the body. Thus we obtain a Volatil Salt, and Volatil Spirit, and if the Vessel be not too high a black Oyl. Then we put all together in a Glais Body cover'd with a Head, and so we have the Rectified Spirit and Volatil Salt: Which we reserve apart.

The Salt may be given from five to fifteen Grains in some Liquor. The Spirit from ten to thirty drops in some Vehicle. In Hysterick and Hypochondriacal Diseases, they push out by Sweat the Acid humours that Nestle in the Body; and by the same consequence promote the Transpiration of Mercury.

'Tis observ'd that in Winter we may easily have the Concrete Volatil Salt, But in Summer we cannot get much because the Urine ferments quickly. And the Spirit of fermented Urine differs extremely from the other; for if ye take the Phlegm from it, and mix it with Rectified Spirit of Wine, 'twill make a white Curd, which the other do's not.

The

Chap. X. Of Remedies which stop a Salivation. 273

The Elixir of Juniper, the Volatil Salt of Hartshorn, The Extract of Juniper, the Volatil Salt of Human Blood, and almost all the Diaphoreticks are of excellent use in this case.

Sudorifick Pilsans of Guajacum, China, Sassafras, Avens Root, &c. These I say are very proper. Exhibit two or three glassfuls of 'em in the Morning while the Person is a bed. If ye desire 'em purging, ye may add Senna, Gummy Turbith, Hermodactyls, &c.

Notwithstanding all the force of Sudorificks, repeated Purges and Astringent Cataplasms, Sometimes the Salivation will still continue. In that case 'tis presum'd the Jaw-bones ate *Carious*; and the corrupt part must by all means be taken off. Of this more elsewhere.

If the Patient find himself very weak, we may administer two drams of the following Tincture in a Glass of Wine.

Take half an Ounce of Sassafras, an Ounce of Avens-roots, and three drams of Amber pulveris'd, pour upon 'em six Ounces of Spirit of Wine. Let 'em digest together for eight days. The Glass being often shak'd.

This Tincture is good when Persons are molested with wandring pains; after the Fluxing is over. We may give it from half an Ounce to an Ounce in a Glass of Pilsan.

If all these Remedies can hardly procure sufficient Sweats, we must have recourse to External Remedies, such as Bottles of Hot water laid in the Bed, Stoves, Spirit of Wine kindled, &c.

We may also mix some Preparations of Mercury with Purgatives. So the Mercury in the Body joyning with the other may be work'd out.

We may likewise give Opiats or Conerves with Gold in Powder or Leaf.

A List of the REMEDIES that stop a
SALIVATION.

Purgatives,
Diureticks,
Astringent Decoctions,
Tincture of Roses,
Allum Water.

Gold Leaf from fifteen to five and twenty Grains.

Fulminatory Gold from two to eight Grains.

Volatil Spirit of Sal Armoniack, from ten to forty drops
in some Sudorifick Water.

Volatil Sales,

Volatil Spirits,

Cinnamon Water,

Essence of Cinnamon,

Syrup of Cinnamon,

Juniper Berries,

Extract of Juniper,

Elixir of Juniper,

Waters of Carduus Benedictus,

Baum, &c.

Diaphoretick Antimony,

Bezoar Mineral,

Poterius his Diaphoretick.

See the List of
Diaphoreticks.

FORMS of RECEIPTS.

An Opiat.

Take half an Ounce of Venice Treacle, two drams
of the Extract of Juniper, a dram of the Volatil
Spirit of Sal Armoniack, half a dram of fulminatory
Gold. Mix all with some drops of the Syrup of Cinna-
mon. Dose half a dram at a time. Drinking above
it four Ounces of the Water of Carduus Benedictus.

A Gar-

A Gargarism to Stop a Salivation.

Take of Plantane Leaves, a handful; Red Roses three
Pugils. Boyl all in a pint of Water; adding half an
Ounce of Rock Allum, and an Ounce and a half of
Hony of Roses. Strain out the Decoction thro' a piece
of white Linnen, and wash the Mouth with it.

Another Gargarism to cleanse Ulcers.

Take an Ounce of Mastick Wood, a dram of Sal
Armoniack. Boyl in Water, strain out, and add an
Ounce of the Syrup of dry'd Roses.

'Tis to be observ'd that before we use Astringents, we
ought to clear the Guts with Clysters, and withal exhi-
bit some Purgatives, that the Mercury and some parts
of the Spittle which keep up the Salivation may be
turn'd down.

CHAP. XI.

Of Sneefing Medicines.

SEveral Physicians have set up the Brain for the *The Error*
Seat of the Pituita; from whence they think it *of some*
slides down upon other parts; and occasions an *Physicians.*
infinity of Disorders. If it thrust it self into the
Nerves, think they it causes Palsies; if it over-run
the Membrans, Gouts and Rhumatisms insue. In a
word, there's no disease almost but what they rack'd
the Disorders of this humour to. In pursuance of
this Scheme, they beat their heads to find out Re-
medies to Purge humours in the Brain. These they
term'd *Caput purgia*. And looking upon the Nose
and Mouth as the principal shores of the Brain,
were chiefly bent upon draining the humour that

way. For this purpose Sneefing Medicines, Chew-
ing Medicines, &c. were mightily in Vogue.

But the latter discoveries of Anatomy shew, that the Brain is not the Seat of that humour, and beside that its Cavities have no Communication with the Nostrils or Mouth, Upon this Account some Physicians have quite discarded all Sneefing Medicines. But they carry the matter too far. Tho these Remedies fetch nothing out of the Brain, yet nevertheless they are very serviceable. 1. They promote a copious filtration of Mucilaginous matter in the Glandules of the *Membrana Pituitaria*; which is thrown upon the Nostrils. 2. They may furnish some sharp Salts which mix with this humour, and while they accompany it thro the course of Circulation may correct and dissolve its faulty particles. 3. They shake and squeeze the whole Body, and by that means may call up the Spirits or determine their Motion.

This therefore must be allow'd, that tho the brain discharges nothing into the Nostrils, yet Sneefing Medicines are not uselefs.

*The use of
Errhina.*

There are some of these Remedies which cleanse the Nostrils without Sneefing. Such we call *Errhina*. Commonly they consist of the Juices or Decoctions of Plants which abound in sharp and Volatil Salts; such as Soubread-roots, wild Cucumbers; the Juices of the leaves of Beets, Pimpernel, Sage, Marjoram, Penny Royal, Euphorbium, &c. In former times they were made use of in Apoplexies, and all Diseases arising from the cold *Intemperies* of the brain. But now that we know the Brain is not empty'd by the Nostrils, they are altogether omitted upon such occasions. And 'tis only for the Obstructions in the Glandules of the *Membrana Pituitaria* and stoppages of the Nostrils, that they're us'd, and that at a time, when Strong Sneefing Pouders are improper by reason of the shaking motion they occasion. They are useful in all head Aches attended by a Sense of weight in the
- fore

fore part of the Head, that is such as take rise from a faulty filtration in the Nostrils.

For an *Ozena* and Ulcers of the Nostrils, we may make up Vulnerary *Errhina's*. But not of such sharp Ingredients as I mention'd but now. By no means. The proper Ingredients for that purpose are Birth-wort, Agrimony, Comfrey, &c. to be us'd by way of Decoctions injected into the Nose.

Here we must call to mind what I deliver'd above of the Various ways of applying these Medicines.

Sometimes we put 'em up into the Nose with Tents or Pledgets: Sometimes we bring 'em to a solid consistence by way of Extract and thicken'd Juices, and give 'em a form answerable to the Capacity of the Nostrils.

In this Rank of Medicines (as I intimated before) we reckon Soubread, Wild Cucumbers Pimpernel, Beets, Sage, Marjoram, Euphorbium, &c.

Soubread is very sharp. It contains Volatil Salts, *Soubread*, Urinous Spirits, and a sharp Oyl. Therefore 'tis rarely given inwardly. Externally in Plaisters it dissolves hard and strophulous tumours, the Shingles, &c. Of its Juice we make an Errhinum which by Vertue of its Irritating Salts procures the Evacuation of mucilaginous matter. 'Tis likewise us'd in Pessaries to bring down the terms. Instead of the Juice we may use the Pouder of its Root.

Beets abound in Nitrous Salts. The expres'd *Beets*, juice is us'd for Sneezing. Sometimes for the same purpose we only thrust up the Leaves into the Nostrils, or else mix 'em with the Juice of blew flower'd Pimpernel. 'Tis very serviceable when a pain besets the fore-head; because it brings away the Glutinous matter that stops the Passages. The Decoction of its Leaves is likewise us'd in Clysters.

Pimpernel, (I mean both that with the blew and *Pimpernel's* that with the red flower,) by distillation yields

Acid Spirits, Urinous Spirits, an Oyl, Earth, and some fix'd Salts. The Essential Salt of this Plant is not unlike Sal Armoniack. Perhaps 'tis upon that account that Authors recommend its Decoction in Wine or Water against Malignant Fevers. *Doleus* tells us a friend of his was wont to cure Madnes with an Ounce of the Juice of young Swallows mix'd with Pimpernel Water and exhibited three or four times. This he says was Reckon'd a mighty Arcanum. Doctor *Michael* had an Essence which he made of the flowers of St. *Johns* wort, Red flower'd Pimpernel, and Asses blood digested in Spirit of Wine: This Essence he gave out as a wonderful Specifick against Madnes and Hypochondriacal Melancholy. *Poterius* alledges that the Decoction of this Plant is an admirable Vulnerary, and mitigats pain and several other Accidents. The Juice of this Plant may be mix'd with the *Errhina*, not only as a Vulnerary but as a cleanser.

Wild Cucumbers.

In speaking of Elaterium, I gave an Account of Wild Cucumbers. I shall only add that they enjoy a Sneezing quality, but by reason of their sharpness ought to be qualified with other Ingredients.

Euphorbium.

Euphorbium is an Exotick Gum, which contains very sharp Volatil Salts, and a strong Body'd Oyl. It ferments very sensibly with Water, and out-strips Hellebor for Sharpness. For which Reason it should not be us'd inwardly. Some Authors indeed prescribe it for Robust Country Folks, to five or six Grains in Hydrophical cases, but then they correct it with Acids, which fix the Volatil Salts and lessen its Force. 'Tis successsfully made use of in Powder for the *Caries* of Bones, by reason that its Sharp Salts defeat the corrosive Acid that gives rise to that Symptom. If ye please ye may dissolve it in Spirit of Wine, and apply Pledgets dip'd in the Spirit to the disorder'd Bone. If ye mix it with Oyl of Linseed and apply it outwardly, 'tis a good Remedy for

for Inveterate Sciatica's: But *Tachenius* tells you it is very painful.

However Euphorbium makes a strong Sneezing Medicine. But it must not be thrust into the Nose, neither in Powder, nor any solid form, by reason of the Bleedings that its corrosive qualities may occasion. We may make a slight Decoction of it in Water, and snuff it up or apply tents dip'd in it. Thus it causes a Running and Sneezing.

Sage is rich in Volatil Urinous Spirits, Volatil Salts, an Ethereal Oyl, and a fix'd Lixivious Salt. It possesses a phlegm faintly tainted with an Acid and a little Earth. Hence 'tis easy to guess that its principal Vertue lyes in drinking up acids. Thus we see it precipitates the Solution of Vitriol; moreover by vertue of its Aromatical and Penetrating parts, it softens the Acids that it cannot imbibe; and upon these Accounts is of excellent use in all Nervous Disorders, or such as take rise from the Acidity of the Lymph. Its Decoction or Infusion in Water is of use to open, remove obstructions, and procure Urine or Sweat. 'Tis us'd in Palsies, Convulsions, disorders of the womb, and above all in the Scurvy. *Rulandus* cries up its Infusion in Wine, and tells you he has cur'd several Epileptick Persons with that one Medicine. If ye beat up this Plant with Water it gives a juice which is a strong Vulnerary Errhinum, and likewise fetches out Serosity.

Marjoram is much of a piece with Sage.

White Vitriol dissolv'd to a dram in a pound of Water makes a Liquid Errhinum, to be applied with a Clout or Tent to the Nostrils; which causes a Running at Nose, and a gentle Sneezing; and cleanses its Ulcers, if there are any. If ye please ye may inject the Liquor. As for the Nature of Vitriol 'tis accounted for elsewhere.

Sneezing Medicines (as distinguished from the use of simple Errhina's) Evacuate the impurities of the Nose, and cause a Sneezing. Now to form a just Powder.

Idea of the manner of their operation, we must first fix upon the true notion of Sneezing.

Some Physicians are of Opinion that the Membran of the Nose proceeding from the *Dura mater*, and being provok'd communicates the Irritation to that Membrane which diffuses the same through all the Membrans of the Body, causing a slight Contraction or Starting among 'em.

But this advance do's not answer the Question, because Sneezing supposes somewhat more than a mere starting.

A Late Anatomist pretends to explain it thus. *The Union of the Soul with the Body is settled upon such a foot, that when one part is in distress, the others that are in any capacity to relieve it are presently to take the alarm. Now when a foreign body provokes the inner membrane of the Nose, there being no Muscles to shake it off, Nature has provided this relief that upon such occasions the Air shall be liberally suck'd in with a large Inspiration, to the end that the Strength of the succeeding Expiration may be able to beat off the offending matter.*

This Explication, I take it, is not very Mechanical. Neither do's it Account for many accidents which accompany Sneezing. as 1. Why all the parts should at first stand still, without motion. 2. He tells us the final cause of the motion of the Muscles in the Respiration; without taking any Notice of the Efficient Cause. 'Tis true he says, *the Smelling Nerves, their Ends are placed very high, just by those of the Organs of the Respiration; and when the one are provok'd, the Spirits in the other rebound.* But he should have remember'd that the Smelling Nerves terminat in the Corpus Callosum and do not go beyond in it.

To tell my sense of the matter, I think Sneezing is brought to pass thus. The internal membran of the Nostri's communicates the Irritation to the *Dura mater* by means of the Olfactory Nerves, upon which the *Dura mater* contracts
it

it self, by recalling the Spirits in the fleshy fibres, so that for some time the Spirits are hinder'd to move almost all over the Body. For one part of the Cortical Substance being press'd, the course of the Spirits must needs be interrupted in some places. And this compression which stops 'em in one place, will occasion their Crouding into the other Channels where the Passage is easier, that is, to those which lead to the Organs of Respiration. Now this will afford us a Mechanical Reason, why after an extasy or standing still of the Spirits, presently a large Inspiration follows, and that's succeeded by a violent Expiration.

The principal force of Sneezing Medicines lies in their Irritation. They may be used in all Obstructions of the Brain; for when the *Dura Mater* squeezes the Spirits, it gives them a sufficient motion to force their Passage. Besides, in all Irritations we see the Soul is more watchful and attentive. Thus they are serviceable in Apoplexies, Palsies, Sleepy Diseases, &c.

All sneezing Med'cines are largely indow'd with sharp Volatil Salts. Such are Lilly Convally, Betony, Ginger, Pellitory of Spain, white and black Hellebor, Tobacco, Sage, Marjoram, Euphorbium, Castor, Spirit of Sal Armoniack, &c. Now all these abound with a Salt extreamly sharp, which violently twitches and irritats the internal membran of the Nose.

Notwithstanding that these Remedies are good on some occasions, yet their frequent use is pernicious. For, beside the baffling and wearing out of the sense of smelling, the Contraction of the *Dura mater* frets the Spirits so that they insensibly tear the Texture of the Brain and Nerves. For this reason such Persons as are wont to Snuff much Tobacco, do quickly become dull and sluggish. Some Physicians unacquainted with Anatomy have referr'd this effect to the Tobacco's getting up into the

the Head, as if it could pass thro the holes of the sieve bone.

Persons subject to Convulsions or Hysterick Passions are forbid these Remedies, because the Diseases now mentioned take rise from the disorder of the Spirits, which this sort of Medicines inflames.

*Lilly of
the Valley.*

The Flowers of Lilly convally macerated and distilled afford Acid Phlegms, a Volatil Salt, and an Oyl. If ye mix them with Wine or Brandy, ye may draw off a Cephalick Spirit of Wine, of Excellent use in Epilepsies and all nervous Diseases. But the Spirit drawn from the Flowers fermented, is yet more effectual for these purposes. If ye pour this Spirit upon fresh Flowers, 'twill draw a Tincture or Essence of the flowers of Lilly of the Valley, which is still more active than the Spirit; ye may dissolve in it a little Ambergrise. The Essence will be the better for it, and then its dose must be regulated by the proportion of the Ambergreese. The Essence thus improv'd must not be smell'd to by Histerical Women, for it calls up amorous thoughts. The Powder of the Root and Flowers of this Plant will cleanse the Nose and provoke to Sneese. The Root is more violent than the Flowers. 'Tis a Common ingredient in all Sneezing Compositi-
ons.

Betony.

Betony affords some Urinous Spirits, a great deal of Oyl, a little fix'd Salt and Earth. By Vertue of its penetrating Oyl, 'tis serviceable in the Disorders of the Head, and procures Urine; the Infusion or Decoction of its Leaves is good against the Jaundice, Green-sickness, Cachexies, and Sciatica. It may likewise be us'd for internal Ulcers, and to promote a Salivation. The Green Leaves thrust into the Nostrials will provoke to Sneezing. If ye dry 'em they make a Sneezing Powder. Its Plaister, Decoction, and Cataplasme are used for Wounds, and pain in the Head. Thomas Bartholin in his Anatomical Histories tells you the Roots of this Plant will rise to the Head
and

and intoxicate. This he makes good by a story of some Gardners, that by pulling up this Plant in the Garden of a certain Apothecary became all Drunk. When they were question'd about the Liquor they had drank, they all protested they had drank nothing, but only when they pull'd up the Roots of that Plant were so struck in the Head. Monsieur *Tournefort* tells us, the Roers of this Plant will Purge both upward and downward. I wish he had told us in what dose; for I never heard of the Observation before.

There are several sorts of Pepper. Some is round, and some long; some black, and some white. But they all jump in the same Vertues. Some say the white is only the black without its outer Bark. It contains sharp Volatil Salts and a little Oyl. Therefore its Volatil parts having so little Oyl to Screen 'em, do quickly discover their utmost sharpness, and are soon dispers'd. While 'tis pounded, the Volatil Vapours that arise will provoke to Sneese. We use to take three or four Corns either whole or bruis'd, not only in the Colick; but in the cold fits of Agues after the General Evacuations. But the better way is to mix four or five drops of its distill'd Oyl, with a Dram of the Extract of Gentian, and exhibit it before the invasion of the fit, especially in quartans. Its Oyl mix'd with Oyl of Nut-megs is good to rub the Stomach with. Pepper in Powder serves to contract the Palate of the mouth, when it shoots out too far.

Pellitory of Spain, its Roer, has a sharp burning taste. If ye mix it with Aqua-fortis, it boyls extremly. Whence we may conclude, it is rich in Alkali's, and those withal in a libertine state. When we take it into the mouth, it gives a burning impression which continues for some time, pacifies Tooth-aches, and fetches out a great deal of Spirtle. In Sneefing Compositions 'tis com-

commonly an ingredient. Its Decoction given inwardly promotes Urine, and corrects Acidities. Some say 'tis Stomachical.

Ginger.

Ginger is sharper to the taste than pellitory, yet it hardly ferments with Aqua-fortis. It contains sharp Salts and an Oyl. 'Tis very Stomachical, helps digestion, dissolves Acid slime in the Stomach, and dispels Wind. For which reason some correct Senna with it. It procures Sweat, and is very proper in Inveterate Coughs. We are wont to apply it with Cataplasms for pains in the side. 'Tis one of the common ingredients in Sneezing Powders.

White Hellebor.

While Hellebor contains a Spirit, and Salts that are extremely sharp. It causes Sneezing with the utmost violence. Sometimes Bleedings and other Accidents. If we add it to Sneezing Powders, its quantity must be very small.

Black Hellebor.

Black Hellebor is describ'd above. *Vanbelmont* mixes the Powder of its Roots, with an equal quantity of Sugar, adding a few drops of the Oyl of Cloves or Marjoram. Thus he says 'tis an admirable Sneezing Powder.

Tobacco also enjoys a Sneezing Vertue. In those who are wonted to it, it only drains the Nose of its Serofities, but does not make 'em Sneese.

Castor may be added as a fortifier to Sneezing Powders. Florentin Orris may also joyn in, by reason of its Smell, and a few sharp fortifying Particles.

The other Sneezing Plants are sufficiently accounted for above; or else they are us'd so rarely for that purpose, that they do not deserve to be taken Notice of in this place.

A List of Sneezing Remedies.

Tobacco.
 Betony.
 Black Hellebor.
 White Hellebor.
 Mercurial Precipitats.
 Euphorbium.
 Castor.
 Spirit of Sal Armoniack.
 Sage.
 Marjoram.
 Lilly of the Valley.
 Penny Royal.
 Pepper.
 Pellitory.
 Ginger.
 White Vitriol.
 The Roots of Wild Cucumbers.
 Their Juice or Elaterium.
 Juice of Betony.
 Juice of Pimpernel.
 Juice of Soubread.
 Seeds of Gith.
 Mustard Seed, &c.

The FORMS of RECEIPTS.

A Powder for Ulcers in the Nose.

Take Betony and Sage Leaves pulveris'd and
 pass'd through the searce, of each two Drams ; white
 precipitat, two Drams ; florentine Orris in Powder,
 and Sugar Candy Pounded, of each a Dram and a
 half ;

half; mix all together and make a Powder. Put into the Nose half a Dram at a time. It causes Sneefing, and brings off the Slime that sticks to the Sinus, which empty themselves into the Cavity of the Nose, 'Tis of Admirable use for Pocky Ulcers, Ozœna, &c.

A Sneefing Powder for sleepy Diseases.

Take half an Ounce of Tobacco in Powder, a Dram of Hellebor pulveriz'd, fifteen Grains of the Volatil Spirit of Sal Armoniac, mix all together; it makes one Sneese powerfully, and carries off the Snot and matter in the Nostrils.

An Errhinum to be us'd in Headaches.

Take of the Leaves of Pennyroyal and sweet Marjoram, of each a handful; Pound all in a mortar, pouring in by drops two Ounces of Bettony Water. Then strain out all the juice ye can get; and throw it into the Nose by it self, or apply with a little small Spunge, thrust up into the Nostrils; ye may apply it to both Nostrils at once.

An Errhinum which mundifies Ulcers and cleanses the Nose.

Take four Ounces of the Distill'd Water of the flowers of Lilly of the Valley, eight Ounces of Rain Water strain'd. Put in a Dram of Sugar-candy, two Scruples of white Vitriol. Strain all and inject the Liquor into the Nose, or apply it with Tents.

A gentle soft Sneefing Powder.

Take half an Ounce of Black Hellebor Roots, two Drams of the Roots of florentin Orris, two Drams of Sugar, mix all and make a Powder.

Bulan-

Rulandus his Sneezing Powder to be us'd in
sleepy Diseases.

Take of the Seed of Roman Gith, and Roots of black
Hellebor, of each a Scruple, Marjoram, Rosemary,
Sage, of each half a Dram. Mix all with two Grains
of Musk. If ye desire the Powder weaker, ye may add
Florentine Orris, and Lilly Convally Flowers. If ye de-
fire it stronger, ye may add Elaterium, Pellitory, &c.
But take care ye do not add any large quantity of Eu-
phorbium, unless sleep prevail mightily, because it is
very harsh, and Shakes the Body too much.

PART.

A
T R E A T I S E
O F
M E D I C I N E S :

P A R T I I I .

C H A P. I.

Of Alterative Medicines.

Alterative Medicines are such as without Alterative any considerable Evacuation cause some Medicines. Change in the Blood and Humors. To this Class we refer whatever brings down the Terms, expells the *Lochia* or After-Birth, dispels Wind, Expectorates, &c. Which tho' they empty the Body of something contain'd in it, yet they ought to be rang'd in this Class, for as much as their Evacuation is an effect of that insensible Alteration they produce in the Liquors of the Body. In Discoursing of these, we shall all along confront 'em with their Opposites.

Next to these we shall consider such Medicines General as alter the General state of the Humours and Alterative Spirits, under which Head we shall Treat of such ives.

B b

things

things as thicken, make thin, sweeten, precipitate
stupise, heal and dry up.

Specifics. In the last place. Considering the Blood may undergo various fermentations, and may be differently congeal'd or rarified in its parts, whether serous or fibrous, &c. We shall therefore examine such Medicines as are term'd Specificks; where we shall have occasion to shew that *Acids*, tho' they share of one general Nature, just as fix'd and volatil *Alcalies*, yet they differ one from another. Thus the Acid of Brimstone, does not nigh so much coagulate the Blood, as other Acids; and some Hysterick Women, who can't so much as bear the Smell of the Spirit of Humane Blood, are oblig'd by that of the Spirit of Hart's-horn, or Sal-ammoniac.

**Examples
 of Specifics.**

Mr. Boyle somewhere observes, that the Spirit of Verdigrease mix'd with the volatil Salt of Urine ferments without Heat, whereas if it be pour'd on that of Humane Blood, there ensues a sensible heat; &c. 'Tis known to every one that Medicines differently prepar'd, have divers Vertues; Spirit of *Sal ammoniac*, drawn with Lime, does not coagulate with Spirit of Wine, which it will do if drawn with the fix'd Salt of Tartar. Spirit of Humane Blood made with Lime, is less fetid than the common sort, tho more sharp on the Tongue; it yields no concrete volatil Salt, nor congeals with Spirit of Wine, and mix'd with Spirit of common Salt it smoaks without Ebullition: All which shew it to be of a nature different from that which is prepared without Lime.

Other Examples.

I might here produce such experiments as the Dissolutions of Bodies afford. An Acid will dissolve one Metal, and leave another untouch'd: Common Oyl if it float on Aqua-fortis, will presently become white, solid, and crumbling; which Oyl of Sweet-Almond will not do, but in a longer time. *Mons. Tournefort* shew'd before the *Royal Society*, that Oyl of *Sassaparilla* mix'd with rectified spirit of Niter, gave a clear flame; but the same spirit mix'd with Oyl of

of Clove-gelli-flowers, sent forth but a scanty flame with much smoak: He also told 'em Oyl of Annis, or that of Turpentine, had no such effect; though I believe they might, if Oyl of Annis were mix'd with some Acid: For if you rub a paper with Oyl of Anniseed congeal'd by Cold, and thereon put a drop of the Oyl of Vitriol, there will forthwith arise a heat with smoak, and a red Colour.

From hence we may sufficiently understand, that besides those general Changes which may be effected in the Blood and Humours, there are specifick ones, into whose Nature it is convenient to make search; wherein though we are but little assisted by Reasoning, yet Experience under the conduct of a good Judgment will help us out. However Reason is altogether necessary in determining the use of Specifics.

That we may the better comprehend how those altering Medicines, which exert their Activity upon the whole Mass of Humours, produce their wonted Effects, we must observe that our Blood is made up of two differing parts, whereof one is *White*, the other *Red*.

The Composition of the Blood.

The white portion or Serum is congeal'd by the spirits of Salt and Vitriol, because of the Oyl parts that are in it.

Experiments on its white part.

The Oyl of Tartar *per deliquium*, which is the strongest of fix'd Alcalies produces also the same effect: which evidently proceeds from the Sea-Salt lodg'd in the serous parts of the Blood; for the acid part of the Sea-salt, coagulates with Oyl of Tartar.

On the contrary spirit of *Salammoniac*, and other volatil spirits preserve its fluidity.

Notwithstanding these experiments, we find neither volatil spirits, fixt Salts, nor acids, are able to dissolve that hard white and tough Gellie, which is seen in the Blood of such as have the Ptsick, Plurisie or Gout, though time enough is allow'd them for that purpose.

The spirit of Wine also thickens it, but the *Congulum* floats on the liquor, without falling to the bottom.

From Copper the same Serum will draw a blew Tincture, by which it appears that volatil spirits are contained in it.

It is easily converted to a Gelly by Fire, which also may be prevented, if you add to it the volatil salt of Humane Blood; whence we may learn how profitable this salt may prove to hinder the coagulation of the Blood.

Its Analysis.

If we examine this white part of the Blood by a Chymical Analysis, it will afford much Phlegm, a Spirit and a volatil Salt, a fetid oyl and a little fixt Salt, resembling Sea-salt, not in taste only, but in that it dissolves not in the Air; it precipitates a solution of Silver, but not that of *Sublimatum*. This has been long ago observ'd by Mr. Boyle: And indeed 'tis no wonder this fixt Salt should yield an acid spirit, being it is of the Sea-kind; but 'tis pretty strange to find so little acid in the Blood.

Experiments on the red part.

The red portion in the Blood, if you pour upon it Vinegar or any other acid, will exchange its Crimson for an obscure yellowish Colour, which volatil spirits will again restore; but the Air alone will give it yet a more lively colour than these. Fixed Alcalies also recover its red Colour, but less than volatils. Spirit of Wine congeals and hardens it, whereby we know there is an acid contain'd in it.

When dry, 'tis very inflammable, and betrays its Oyliness, whereas the white part burns with difficulty.

Its Chymical resolution.

This florid part of the Blood by Analysis yields much Phlegm impregnated with volatil spirits, much Oyl, much volatile and a little fixed Salt, which according to *Tachewins* will not precipitate a solution of corrosive sublimat, unless we add some Lye to the Blood before Distillation.

All these Experiments may be of use in explaining the force of Alterative Medicines upon all the Humors; ; but to keep close to our proposed Order, we will begin with such as approach nearest to the evacuating tribe.

Wherefore we shall speak first of those which bring down the Courses, and then pass on to the rest as they lye in order.

But first of all 'tis convenient to observe that almost all altering Medicines operate by fermentation, and consequently put in motion the humour which causes the Distemper, whereby the Symptoms are oftentimes increas'd: 'tis expedient therefore to exhibit them at first in a small Dose, chiefly in Chronical Diseases, where there is not much danger in a Delay: On the other side, since it is almost impossible that one Dose should cause any sensible effect, we must continue their use for sometime, increasing the Dose gradually.

'Tis expedient also to remark that such Medicines are to be given, some in hot, some in cold Vehicles; almost all Vulneraries, Stomachicks, &c. must be taken in Liquors almost boiling hot, to carry off that filth which sticks to the sides of the Ventricle; whereas a cold Vehicle is fit for volatilsalts and spirits, by reason that it hinders their dissipation, and withall does not overheat their penetrating vertue.

Moreover, as in acute Distempers we seldom use any altering Medicines, which do not also evacuate, our chief design being to throw out both the Medicine and offending Humour: so in Chronical ones such evacuating Medicines are only to be given as alter and so change the Texture of the Humours as to preserve themselves from being suddenly cast out: And sometimes we see Cures accomplished by specifick Alteratives without evacuation.

Observations on the force of altering Medicines

The difference between Acute and Chronical Distempers.

Explication of some effects of altering Medicines. To conclude these general Remarks on alterative Medicines, it is to be observ'd that some of 'em don't produce certain Effects, unless in a certain Dose; so spirit Wine won't ferment with spirit of Niter, unless its quantity be almost equal. And therefore it's no wonder if altering Medicines produce no sensible effect.

Acids and Alcalies have some times the same effect. In fine, some perhaps will admire that I prescribe for the same Distempers both Acids and Alcalies, and that in cases very near the same; but none ought to be surprized at this: For there are Liquors which Acids and Alcalies will equally congeal; such is the *Serum* of the Blood: I do yet remember that with a Lye I once reduced into Salt a Fusion of Lime and Sea-salt, which afterwards I dissolved in a Cellar, into a clear Liquor, that by addition of spirit of Vitriol, or Oyl of Tartar *per deliquium*, became white and curdled like Milk; It had yet one Property wherein it resembled the serosity of the Blood, namely that the volatil spirit of *Sal-ammoniac* was so far from congealing it, that it would maintain its Dissolution. Whence I conclude, some Acids and some Alcalies may have the same effects.

CHAP. II.

Of the Medicines which bring down the Terms.

IN order to understand how the Medicines which bring down the Courses, operate, 'tis requisite to know, first, The natural Causes of that Flux. Secondly, The Causes which hinder it. Thirdly, Such Medicines which assist the former and thwart the latter.

How the
Emmen-
oga ope-
rate.

In my *Rational Anatomy*, I have given my opinion of the ordinary cause of that Flux: and shall only now observe, that at that time there is a fermentation in the blood, and irritation of the inner Cavity of the Womb.

The Causes which hinder this Flux are, whatsoever does lessen or destroy the fermentation of the blood, or by rendring it too gross, shuts up the pores of the Womb, or else cramps that ferment which irritates its inner Cavity.

Causes
hindering
the Flux.

If these causes take place in the time of the Flux, they stop it. Thus cold Water drunk at that time puts a sudden stop to them, because it extinguishes the fermentation of the Blood, and congeals, or at least thickens it. Frights and Grievs have frequently the same effect; but for this we can scarce assign a reason, because we are in the dark how the Soul operates upon the Body.

Among all the Remedies that are in use to provoke the Courses; bleeding in the Foot is undoubtedly most in vogue: But it is only advisable when they once begin and afterwards cease, or then flow too sparingly; as *Lindanus*, *Riverius*, and some o-

The ad-
vantages
of bleed-
ing.

B b 4 others

thers have observ'd. But if they don't appear at the time accusom'd, bleeding in the Arm is more convenient. The reason of the difference is obvious: for, supposing, which may easily be evinc'd, that the blood glides along more copiously to the place where it is broach'd, if upon the first appearance of the Courtes, one bleeds at the Foot, the great abundance of blood occasion'd by the Fermentation and Irritation of the Womb, and increased by the bleeding, will hinder the Vessels to empty themselves, by reason of the over-bearing fullness, and the disproportion'd smallness of the Capillary Vessels. For a contrary reason, bleeding at the Arm must then have a desirable effect. Whereas when the Fermentation is low, it must be very hurtful, by hindering the blood and spirits to flow into the Womb.

We must
have re-
gard to
the first
passages.

In the suppression of the Terms, the Stomach and Guts are always stuffed with clammy humours; which disturb the first Concoction. Perhaps the Chyle being crude, mairs the Fermentation of the blood, and by consequence the flowing of the terms: Possibly also, the stopping of that Flux, hindering the purification of the blood, depraves the Stomach; whence the food, not being well digested, leaves behind it impurities in the first Passages.

So long as the Stomach is fill'd with viscid humours, all inward Alteratives will prove ineffectual. Wherefore if vomiting be indicated, such Emeticks must be given as put the Blood in motion; such as preparations of Antimony, or those of the root of *Asarabacca*: But if the Impurities are in the Guts, such Purges are to be us'd as excite the fermentation of the blood, and destroy its Acidity: such as *Coloquintida*, the extract of black *Hellebor*, *Turbit*, *Agaric*, and especially *Aloes*, or Remedies compounded of these Simples.

After

After the first Passages are cleared, our only business is to excite the fermentation of the blood, without throwing it into Confusion, which may be done by the use of *Aromaticks*, or such things as abound with Volatil Salts.

Medicines which excite the fermentation of the blood.

We may use, with success, opening Roots, as those of Parsley, Smallage, Eringo, Angelica, Birthwort, Restharrow; Leaves of Mugwort, Feverfew, Savine, Penny-royal, Wild Marjoram; Juniper-berries; seeds of Wild Carrot, Carraway, Parsley, and Fennel. Among barks of Aromatick plants, Cinnamon is of greatest Vertue; Among Fruits, Nutmeg, Mace, Cloves; among Flowers, Saffron, Lavender and Rosemary Flowers; among Animals, Crabs bruised and infused in Wine, Castor, the Decoction or Essence of the Spleen of an Ox: But all these are very much inferior to Volatil Salts, as the famous *Silvius* hath observ'd. These exert their whole vertue in moving and making fluid the blood, and promoting the fermentation, which is the principal cause of the Monthly Flux. Wherefore if we desire they should certainly produce the effect, we must not use them, till about the usual time of the appearance of the terms; but if they have been long suppress'd, and we know not when they should come, we must choose a time of the Month, when the blood is in some fermentation, because 'tis then ordinarily that Nature strives to throw 'em out. If at any time the Patient is more Feverish, complains of a heaviness in the Loins, and heat in the parts, then is a fit season to administer such Medicines.

Signs of the monthly Flux.

To this purpose we may also use Baths, wherein Aromatick plants have been boyl'd, to which we may add Emollients, such as Lillies, &c.

To promote the Irritation occasion'd by the ferment, we may make pessaries of sharp and volatil ingredients, such as the extract of black Hellebor with Honey, or Honey boyl'd with an Ox-gall. But these are only for experienc'd Women. For Maids Fomentations and Liniments are more proper.

Medicines promoting Irritation.

Both

Both the one and the other may be Fumigated for the same purpose, the smoak being conveyed thro' a Funnel to the secret parts; upon this occasion we throw trochisks, made up with Myrrh, Amber, and Coloquintida, upon burning Coals, or pour a Decoction of Mugwort and Savin upon hot Flints. The Dross of the *Regulus* of Antimony mixed with Spirit of Urine, and cast upon hot Flints, or burning Coals, is also very much commended.

But the better way is to put into the *Vagina* the neck of a Glass Phial, wherein this Mixture is contain'd, whence the spirits having free passage to the Womb may open its pores.

But oftentimes the congealing of the Blood by some coarse Acid, is the cause why the Couries don't flow; and then the more fix'd Alcalies produce the desired Effect. Thus we successfully use Powder of Amber; *Poterius's* Antihectick Powder, diaphoretick Antimony, Salt of Tartar, steeled Tartar, *Crocus* of *Mars*, and all the Preparations of Iron, and also many astringent Medicines, which here by accident become Aperitive, such as Pomgranate-rindes, Citron and Orange-peel, Myrrh, &c. 'Tis true, many of these contain some volatile parts, but their chief Virtue lies in destroying Acidities, when they are given without any preparation. Indeed if with Spirit of Wine you extract the Tincture of Myrrh, then it contains only the volatile parts thereof, and its only quality is that of increasing the fermentation of the Blood.

We may draw, by distillation, from Aromatick Plants, Spirituous Waters, for the same use; Among which, strong Cinnamon-water given from one to three spoonfuls, is the best.

The Oyl which floats at top, when this Water is distilling, is properly the Essence of Cinnamon, which, mixt with an equal quantity of its Tincture, and as much volatil *sal ammomack*, and distill'd, will yield an Oily volatil Salt; and a Spirit, which given from ten to twenty grains, power:

Medicines
that dissolve the
coagulation of the
Blood.

powerfully brings down the Terms, and justly claims a Title to the same virtue which *Silvius* ascribes to his, whereof he has left us no description. 'Tis sufficient to understand, that all the Stratagem lies in uniting the Salts, or volatil Spirits, with some Aromatick Essence.

We may also use that which we describ'd when speaking of *Tartar*, or that of Monsieur *Tournefort*, in the Preface to his Book of Plants about *Paris*; or else that which Mr. *Boyle* makes by mixing Oyl of Annise with Spirit of Wine, and an equal quantity of Spirit of humane blood: After all is well shak'd, that it may congeal, we must let it settle, and with a gentle heat sublime a volatil Salt, which putting off its rankness, becomes more sweet.

Elixir Proprietatis, which, as we have said, is a Tincture of Myrrh, Aloes, Saffron, Castor, &c. in spirit of Wine, provokes the Courses, but instead of the Acids which are commonly joyned, we should add the volatil spirit of Salammoniac, and *Tartarum foliatum*; or else we ought to dissolve the Saffron, the Aloes and the Myrrh, in oyl of Tartar; and having dry'd them, extract the Tincture with spirit of Wine.

Among all the different Remedies which might answer our present intention, we shall choose only to speak of Savin, Mugwort, Feverfew, Saffron, Myrrh, Gum-Ammoniac, and Iron. The others we have treated elsewhere, or shall have occasion to mention them in the sequel.

Mugwort, when annals'd, yields an acid Phlegm, Mugwort. urinous Spirits, a concret volatil Salt, and a fixed Salt, which renders it very fit to open Obstructions, and correct the acidity of the Blood. By making the blood more fluid, it promotes the egress of the Courses, and expells a dead Child; and may be us'd in Baths, for both purposes. Its Decoction or Extract, are also admirable for bringing down the Terms, and stopping Vapors. *Pareus* was wont to boyl the Ashes of this Plant in Water.

ter, till they become dry, and so reduce them to troches of the quantity of a scruple a piece. He says, one or two of these troches dissolv'd in three ounces of *Spanish Wine*, are an admirable Remedy in the beginning of the Plague. He tells us, they Vomit, Purge, and promote Sweat extreamly: The Coal of Mugwort reduc'd to Powder is recommended by some against Epilepsies; and *Etmullerus* says, tho he had always taken this for a vain Medicine, in regard the Plant must be burnt on the Vigil of *St. John's* day; yet he knew a Child was cured by swallowing down at each time as much of it as would lie upon the point of Knife.

Feverfew. Feverfew hath almost the same principles as Mugwort; only it seems to have a little more of a sharp volatil Salt, and somewhat less Sulphur: It hath almost the same Virtues, but seems more powerfully both to expell Wind, and provoke Urine; it eases the pains after Child-bearing, but its chief Virtue is to move the Courses, and destroy Vapours: we may use it either in Decoction, Syrup, Conserve, Extract, or Tincture.

Savin. The Savin Tree contains much of a biting Oyl, and some volatil Salts; from whence possibly proceeds its perpetual verdure. Its Decoction brings down the Courses, and expells the Child; wherefore we ought to be cautious in using it: It is seldom to be given in substance, seeing its Powder is so corrosive, that if applied to Venereal Warts it makes them fall off no less than Oyl of Vitriol, or other potent corrosives. This Powder, mixed with beaten Glass and Hony, externally apply'd, kills the Navel Worm. It may be put in Decoctions for inward Ulcers with six or seven times as much of other vulneraries. Its distill'd Oyl does powerfully expel the Terms.

Saffron. Saffron distill'd yields at first a sharp spirit, like that of Hellebor, a little Oyl, some volatil Salts, and many fixed parts, being of a middle Nature between volatil and fix'd. 'Tis easily dissolv'd because it hath little Oyl, and is therefore of little

the use in Artificial preparations. By distillation its volatil parts become too sharp being disunited from the fixed. Its Oyl destroys the Appetite; but a scruple of the Powder given for many days an end, either alone, or with other things, and especially in Wine, brings down the Courses. It is Cordial and Friendly to the Stomach: It is admirable in Consumptions, Asthmas, Convulsions of the Breast, Yellow-Jaundice, and Obstructions: It is very suitable in Hypochondriack and Hysterick Distempers, for it destroys Acids and calms the Spirits, being Anodyne and Narcotick, and is nevertheless useful in Sleepy Diseases. Externally 'tis used in Lotions for pains in the Head, and in Madness, especially with Opium, and in Distempers of the Eyes with other convenient Waters: Its Tincture in Spirit of Wine, is good for a Gangreen; but it must not be taken inwardly, because the stupifying virtue of them both is heightened by their Conjunction, and the spirit of Wine sets at liberty the sharp salts of the Saffron, by destroying the Oyl. We have oftentimes observed, that its use too long continued, or in too great Doses, for instance, two drams, hath proved fatal, causing either incurable loss of Blood, or a Drunkenness accompanied with Laughing, or a Lethargick sleep, &c.

Myrrh is a resinous Gum abounding with oily parts, united to some earthy and some volatil ones; and therefore spirit of Wine won't altogether dissolve it, unless you add some Acid spirit; but Wine it self, or Brandy will do it more easily. If you distil it alone with a Retort, or mixed with bole-Armoniack, it yields scarce any Oyl but only a stinking acid Spirit: but if, after it is dissolved in Brandy, you distill it in a Retort, it will yield an Oyl, which poured on calcined Vitriol, and again distilled, will become clear; and distilled a third time with common Water, will quit the Vitriolick taste. Myrrh may be given inwardly, from a half to a whole dram, and its distilled Oyl dissolved in some Liquor with Sugar,

gar, or mixed with Opiates to fifteen or twenty drops, for opening, cleansing, expelling the Terms and After-Birth; for inward Ulcers, Consumptions, Coughs, Catarrhs, Worms, Vapours, &c. The white of an Egg filled with Powder of Myrrh, and placed in a Cellar, will dissolve into a Liquor, which may be given to two scruples, in the same Distempers, and in contagious Diseases. Myrrh, and its preparations are used also in the Small-pox, and Malignant Fevers. Its Tincture made with spirit of Wine, is only good to resist Putrefaction in external Ulcers; its resinous part being only dissolved. The Liquor of Myrrh is also good for Pimples in the Face.

Gum Am-
moniac.

Gum Ammoniac distilled in a Retort, affords some Phlegm, an acid spirit, a black fetid Oyl, charged with some volatil Salt, and a light Earth containing very little fixed Salt. It may be given from a scruple to a dram, either in Electuaries, Pills, or Powder, not only to bring down the Courses, remove Obstructions, and the Jaundice; but likewise against Convulsive Coughs, Catarrhs, and a toughness of the *Lympha*, especially in an Asthma, or the Gout: for by vertue of its acid spirit, joyned with some volatil salt and much Oyl, it opens and attenuates, and renders the Mass of Blood more liquid. Its Acid spirit retains some of its vertue; and without doubt this, if any of that kind, may be given in the Dropsie or Jaundice. The black Oyl, by the smell is good against Vapours, it resolves Scrophulous Humours, and rectified with Powder of Bricks, or Bole-Armeniac, may be given inwardly from four to ten drops, mixed with some convenient liquor, in Convulsive Diseases. Externally this Gum softens, dissolves, and is good against hard swellings, and accordingly is used in all Plaisters, entitled to these Vertues.

Mars or Iron is a Metal which liquifies the Blood, not only by destroying its acidity, but by penetrating through the whole Mass, and as it were grinding it down with its solid parts, which continually gaining motion, and losing but little, because of the smallness of their surface in proportion to their bulk, do open and break in pieces the parts of the blood that oppose their Course.

We cannot doubt that Iron is a devourer of Acids, seeing with many of them it ferments, and particularly with *Aqua fortis*. Wherefore it is proper in Hypochondriac Distempers, yellow Jaundice, suppression of the Terms, Cachexies, swellings of internal Parts, and almost in all Chronical Diseases: If you dispose it into alternate lays with Horn or any other alkaline matter, and burn the whole to redness, it will become Steel. The same event will follow, if you quench it red hot in distilled Water of Earth Worms, or that of Radishes, or Leeks; because its acidity being destroyed by their alkaline Salts, it becomes less open and more compact; wherefore almost all preparations of Iron with Alkalies, render it less fit for internal Use; and Steel, whatever Authors say to the contrary, is much inferior to Iron, being less penetrable by the acids in our Body.

The more simple and less elaborate preparations of Iron are almost ever the best; thus the file-dust of Iron, which must be free from Copper, given to twelve or fifteen grains at a time, is an excellent Medicine for such as have vigorous Fibres in the Stomach; but the Patient must take care to walk every day after it, which will very much assist its action, not only in making it pass from the stomach, where it might occasion disorders, by acquiring a vitriolick Nature, but also in promoting the Dissolution of the Blood.

If you sprinkle with spirit of Wine, an equal quantity of Cream of Tartar, and Rust or Filings of Iron, and leave them to ferment till they are reduced to a Paste; of this you may make up little

Mars or
Iron.

Filings of
Iron.

Little
Balls of
Steel.

tle Balls, which you may put in aperient Pifanes to be given not only in the evil disposition of the whole Body, yellow Jaundice, Hypochondriac Melancholy; but also in all Distempers where Iron is used, for its opening and cleansing quality.

Its preparation
with
Brimstone.

Some by applying a roll of Brimstone to red hot Iron, make it fall down melted into Water, and then reduce it to Powder: This, tho' by Surgeons and some Apothecaries kept as a secret, is not so good as simple File-dust; for it scarce at all ferments with *Aqua-fortis*, and won't dissolve, being imprison'd by the Sulphur: however, it has this advantage, that its parts being more closely united, it is less apt to be changed into vitriol in weak Stomachs, and so may be used in some Cases.

Aperitive
Crocus of
Mars.

If you sprinkle thin plates of Iron with rain Water, they will contract a Rust, which, after often wetting and drying, taken off and finely purified, is the opening *Crocus* of *Mars*; of this, as of other preparations, where Iron is in substance, we ought not to give above fifteen Grains at a time, lest it should over-charge the stomach: But we may often renew the Dose, some hours after eating.

It is not good to mix Purgatives with Iron, for often times they become thereby too sharp, and the Iron of no Effect; but some days after a Purge may be given.

Theastringent
Crocus.

Iron calcin'd either alone or with Brimstone, yields a Powder call'd, the astringent *Crocus* of *Mars*, which *Crocus* has almost the same Vertues with the former: It may be given from a scruple to half a dram in Fluxes of Blood, and inveterate Claps, and will better drink up Acidities than the Crocusses that are not calcin'd.

The Vitriol of
Mars.

If you expose to the Sun an Iron-skillet with equal parts of the spirits of Wine and Vitriol, and leave it afterward in a cold place, at the sides of the Vessel you shall find Crytals, which are the Vitriol of Iron, and may be given to twelve grains.

they

they operate sometimes by Vomit, sometimes by Stool, and often by Urine; and may be given for a Cachexie, and Dropsie. These Crystals dissolv'd in a cellar are call'd the Liquor of Iron, and have the same Vertues.

If you boyle Cream of Tarter with Rust of Iron, in common Water untill it appears black, and then strain and evaporate the Liquor to the thicknes of a Syrop, you shall have a Tincture of Iron, which is a very good opener from one to two Drams in Broath: If it is brought to the consistence of Hony, it is call'd the Extract of Iron, a Dram whereof may be given for the same purposes.

To obtain an Astringent Extract, you must boil the Rust of Iron in Tent, till the moisture is consum'd. This may be given in a Looseness, Bloody-flux, Bleedings, &c. from one to two Scruples.

Having in the first Volume spoken of the preparation of Tartar Chalybeat, we shall not here repeat it: Nor shall we describe the Flowers of Mars with Sal-armoniac, having done it elsewhere.

The Salt of Iron is thus made; infuse half a pound of file dust in about seven pints of Vinegar eight days, and then boil the whole to a skim, which being set in a cool place, will yield Crystals of almost the same vertues with the Vitriol of Mars, but they are sweeter.

If you continue the fire till all the moisture is consum'd, you shall find a matter at bottom, which being powdered, and left to digest in Spirit of Wine, will afford a Tincture of excellent vertue in inward Ulcers; you may give two or three Drams of it in a Ptisiane.

Burn six Ounces of Aqua-vita upon two Ounces of Iron rust, then dry it, and reduce it to powder, do thus four times, and you shall have a vulnerary powder, either for Internal or External use in Waters or Decoctions for Wounds.

Some Authors esteem the red Bolus, or Earth, found in some Iron Mines, above crude Iron, and give a Scruple of the former with the same precaution as the latter, to bring down the Courses : And indeed since 'tis replenish'd with an Iron that is pretty open, it may prove a good Aperitive.

A List of Medicines that expel the Terms.

E Metick Tarter	}	See Emeticks.
Roots of Asarabacca		
Extract of Hellebor		
Coloquintida	}	See purgatives.
Elder		
Aloes		
Turbith		
Agaric		

Roots of

Angelica	}	From one Ounce to two.
Master-wort		
Parsly		
Valerian		

Roots of

Smallage	}	Infusions and Decoctions.
Eringo		
Rest-harrow		
China		
Avens		
Sarsaparilla		

Woods

Woods of

Guaiaacum
Boxwood
Sassafras
Juniper

}

Leaves of

Mint
Horehound
Wild Marjoram
Penny-royal
Mugwort
Feverfew
Arsmart
Ground-pine
Germander
Tansie

}

To one or two handfulls
in infusion.

Savin, from one to two Drams infus'd in White
Wine: But it ought not to be given without
Correctives.

Seeds of

Gromwel
Wild Carrots
Carraways
Bishops-weed
Annis
Gith
Fennel

}

From an half to a whole
Dram in substance; and
twice as much infus'd
in Wine.

Barks of

Cinnamon
Pomegranat

} from half a Dram to a
whole Dram.

C c a

Nutmeg

Of Medicines which

Nutmegs One in the number.

Mace. From Fifteen Grains to half a Dram.

Cloves To ten in number.

Flowers of

Lavender

Rosemary

Viola

} To half an ounce in infusion.

Saffron, from six Grains to half a Dram.

Animal Medicines

Castor from ten Grains to half a Dram.

Powder of Crabs, to a Dram.

Stones of a Horse prepar'd, to half a Dram.

Spleen of an Ox prepar'd, in infusion.

Minerals.

Filings of Iron to fifteen Grains.

Earth or Bole taken from the Mines, to half a dram.

Chimical Remedies.

Volatil Salts, from four to fifteen Grains.

Volatile Spirits, from four drops to twenty.

Oily volatil Spirits, from seven to twenty drops.

Oils of Cinnamon and Cloves, from one drop to four.

Cinnamon Water, from one spoonful to three.

Tinctures of Cinnamon, of Saffron, of Myrrh, from ten drops to twenty.

Tincture of Castor, from four drops to twenty.

Elixir Proprietary with volatile Salts, from four drops to twenty.

Crocus of Mars, from fifteen Grains to a Scruple.

Vitriol of Mars, from four to twenty Grains.

Tartar

Tratar chalybeat, from a Scruple to a Dram.

Spirit of Gum-ammoniac, from five drops to sixteen.

Waters of Chervil, Lavender, Mugwort, from one to six ounces.

Salt of Iron, from ten grains to twenty.

Tartarum foliatum, to a dram.

Tincture of Iron, to three or four drams in Broth.

Extract of Mars aperitive, to a dram.

Forms of Receipts.

Quercetanus's Decoction of an Ox's Spleen for opening Obstructions and expelling the Terms.

Take the Spleen of an Ox cut into small pieces, and therewith fill a glass-phial to the middle; then add half an Ounce of bruised Cinnamon, half an Ounce of Cloves, two drams of Saffron, and almost half a pint of Canary. Set the vial being well stopp'd in a *Balneum Mariae* for twenty four hours; in this time the Spleen being well boild, there will remain in the vial a good deal of Liquor, whereof let the Patient take every morning four ounces, for four or five days.

Paracelsus and many others have believed, that the Spleen of an Ox was a Specifick, to bring down the Courses in Maids, and remove the Obstructions, and we have reason to think they were not deceiv'd. This preparation we have of *Quercetanus*; but in regard it won't keep, some make an Essence or Extract of the Spleen of an Ox, with spirit of Baum, and to render it more effectual, add some Tincture of Iron.

You may also distill it with Spirit of Wine, and give a spoonful of the Spirit.

A Pouder.

Take two drams of the opening Crocus of Iron, one dram of Mace, and three of Sugar, let the Patient take half a grain of this powder every morning fasting,

Etmullerus's Tincture in imitation of Barbess.

Take two drams of Castor; Volatil Salts of Amber and Harts-horn, of each a dram, pour upon them a sufficient quantity of not over-rectified Spirit Wine, and having added a little Cinnamon Water, let them infuse in a hot place, till the Tincture is extracted: of this give from a Scruple to a Dram, by it self or in some convenient Liquor.

A Julap.

Take four ounces of water of Mugwort, half a spoonful of the now mentioned Tincture, Syrops of Cinnamon, and Mugwort, of each half an ounce; which mix, and give to the Patient.

An Electuary.

Take a dram of aperitive Crocus of Mars, half as much volatil Salt of Amber, four drops of Oyl of Cloves, an ounce of Conserve of Mugwort, and a little of the Syrup of Lavender, or of that of Stoecha, or Wormwood; mix all together: The Dose is from half a dram to a dram, in the morning fasting.

A Wine.

Take a handful of Mugwort, as much Feverfew, half an ounce of Savin, three drams of Gith seed, two of that of Wild-Carrots, and one of Saffron, three ounces of filings of Iron ty'd up in a little bag, pour upon them seven pints of new Wine, and leave all to ferment: Let the Patient drink a glass of this in the morning fasting.

A Ptisan.

Take an ounce of the roots of Sorrel, as much of that of Dandelion, and half as much of that of Soabolly, six drams of Cream of Tartar, and as much of the filings of Iron; boil all in about ten quarts of Water, untill a third part is consum'd: Let the Patient take it for ordinary drink.

C H A P. III.

Of Medicines which stop the o'reflowing of the Terms.

*Causes of
the Exces-
sive Flux.*

IT oftentimes falls out that the Blood, by the use of such food or Medicines as too much dissolve it, becomes so thin, that more of it than ought, makes its passage from the Body by the Womb: Sometimes this Flux continues for some years without interruption, and sometimes tho it keep its usual periods, yet it is so plentiful, that the Patients strength is exhausted.

If to bring down the Courses, Medicines too sharp have been us'd, whether in Fumigations or Pessaries, 'tis to be fear'd they may have opened and corroded some Vessels of the Womb, which may prove the occasion, either of a perpetual or an immoderate flux.

Sometimes it happens in a Miscariage, or hard Labour that some Vessels are broken, and cause the Disorder.

But for the most part the concurring Causes are in the Blood, which being too sharp, or too Serous, does the more easily break forth: And in such cases we see its lesser Agitations, as in Anger, Grief, &c. will increase the flux, as well as more vehement Commotions.

The over-bearing Fermentation of the Blood, may also produce the same Effect, and so whatever heightens that may cause this Disease.

Love, which by hurrying the Blood and Spirits along the body, makes the ferment to distill more plentifully into the Cavity of the Womb, may consequently inflame the irritation of the Mouths of the Vessels that open into it.

The

The Remedies which Cure this indisposition are such as either check the Fermentation of the Blood, or take off its sharp Ferments, or lessen its *Serum* and thicken it, or else lock up the Mouth of the Vessels which were open. We shall consider elsewhere how they produce these Effects.

Acid Spirits stop the Terms, by thickening and congealing the Blood. 'Tis for this purpose we use Verjuice, Barberies, Spirit of Vitriol, &c. *The use of Acids.*

But since commonly it is an Acid, that in losses of Blood ferments the whole Mass; 'tis better to use other thickeners, such as Solomon's Seal, Tormentil, Snakeweed, Marsh-mallows, the four cold Seeds, &c. for these having oily and thickening parts, thicken the Blood, and sweeten its acid and sharp Salts. *Use of mixt Salts,*

Such things as have a mixture of acids and Alkalies as Nitre, and Sal Prunel carry off by Urine a part of that Serum, that makes the Blood too liquid, and also give some thickness to the remainder.

The preparations of Iron, Diaphoretick Antimony, sealed Eart and Coral may either thicken the Blood, or expel some of its watery parts by sweat. They may also act as Astringents. *Absorbent remedies.*

But oftentimes it falls out that the ferment which naturally brings the Terms, is increas'd by a volatil acid in the Blood, and so causes the the excess; in that case we use Orange, Citron and Pomgranat Peels, Pomgranat flowers, and many other Astringents.

Among the Medicines which sweeten the sharp Blood, and withal thicken it, we may reckon up the water of Frogs-Spawn, so much commended by *Tachenius*; Plantane Water, Plantane Juice; Juices of Yarrow, Shepherds Purse, Knotgrafs, and of many other incrassating Plants. Opium and other Narcoticks are also proper on the same occasion. In-

Use of In-
jections,
Cata-
plasms,
Pessaries.

Injectiōns into the Womb may be useful, when the Flux is from the Vessels of the *Vagina*; but they seldom pass the internal Orifice of the Womb: They are made with Juice of Plantane, or of Shepherds Purse, and you may add Allom, Vitriol, Sugar of Lead, *Lapis Medicamentosus*, and other Astringents: You also use Juice of Periwinkle, with the same Astringents, &c. With Astringent Plants likewise you may make up Pessaries, Oynments, and Cataplasms, or you may fumigate the Patient with Vinegar thrown on red hot Iron; or with Troches made with Mastick, Mustard Seed, Henbane, &c.

Fonsæca recommends a Decoction of Mastick-Wood, to stop the Terms and other Bleedings: It operates just as the Gum that trickles from it,

We use the dung of several Animals, as well inwardly as outwardly; such as that of an Ass, a Hog, a Dog, mix'd with Wine, or some astringent Syrup: We also use the Human Skull, and Mistletoe of the Oak, The Yelk of an Egg beaten in red Wine, according to *Hartman*, or in Rose-Water, with *Amatus Lusitanus*, is by them esteem'd an excellent Remedy, yet it operates only by thickening the Blood. Others fumigate with the smoke of a Linnen Cloth stain'd with Menstrual Blood; some order the bloody Cloath to be dip'd in the solution of some Sympathetick Powder; which cannot be otherwise serviceable than by conveying some Vitriolic parts to the breaches of the Vessels. I should rather choose to apply the Solution it self with a sponge to the affected parts.

Others cause a dry'd Toad to be apply'd to the Reins, which I believe can have but small Effect. Some Physicians Order the Legs to be put in cold Water; and this frequently stops the Courses, both by thick'ning the Blood and hindering its free Course to the lower parts. There is yet an infinity of other Remedies behind, but they all operate as those we already mentioned; so the Powder

Powder of Egg-shells acts like other Astringents; that of Rosin, as other Incrassaters. The Powder of Turtles, describ'd by *Forestus*, operates as an Astringent and Incrassater, &c. Allum in Powder is Acid and Astringent.

Of all the Medicines abovemention'd, it will suffice at present, to discourse in particular of *Bistort*, *Mony-wort*, *Periwinkle*, *Purslain*, *Knot-grass*, *Plantain*, *Mastic*, *Frogs spawn*, and *Coral*.

Snakeweed contains some Acids wrapt up in Earth, and blended with Urinous Spirits, so that one may look upon it as laden with an Aluminous Salt, and a Sal ammoniac, and therefore reckon it Cordial and Astringent: A decoction of the Root may be us'd against the immoderate flowing of the Terms, and all kinds of Vomitings, particularly that of Blood. *Silvius* us'd to dissolve some Syrup of Mugwort, in a Decoction of this Root with leaves of Marjoram, and gave it to bring away the after-birth, when a part of it remain'd that occasioned lo's of Blood. *Etmullerus* recommends the Powder of this Root for bleeding in Malignant Fevers, when External Remedies come short of the cure. It may be given to a Dram: The Root may also be used in Cataplasms and Injections.

Mony-wort is replenish'd with an Aluminous *Mony-wort* Salt, for it contains much acid Phlegm, some Earth, and scarce any urinous Spirit or fixed Salt. It is astringent and vulnerary; some handfals of it may be put in a Decoction, against all Fluxes of Blood whatsoever.

Periwinkle is stock'd with an acid Phlegm, and Oyl, which makes it very fit for internal and external use in all bleedings. It is put in many vulnerary Decoctions against Consumptions, and the Bloody-flux; it is happily used in Gargarisms for the Inflammation of the Glandules of the Mouth: Externally apply'd in a Poultis upon the lower part of the Belly, it stops the Courses: Its
Decoction

Decoction taken in the morning fasting may serve to the same purpose, tho' some recommend it for a contrary Effect.

Purslain.

Purslain abounds in acid Phlegm, volatil Salts, and in Oyl, and is therefore vulnerary, comforting, and fitted for stopping Bleedings of any kind. We may take six Ounces of the Juice, or almost a Quart of its Decoction in the space of one day; or several Drams of the Seed: The distilled Water which contains nothing but its dry volatil Salts, is admirably well fitted to assuage the heat of Fevers, by imbibing the fermenting acids; for the same reason it is wonderful in losses and spitting of Blood, and in Phthitics: The Decoction is extoll'd as good against the Worms. We may outwardly apply the Water or Decoction in Inflammations, pains of the Head, Bleedings, &c. It may be used in Gargarisms for Inflammations of the Throat.

Knotgrass.

Knot Grass contains much Acid and Oyl, and little Urinous spirit: Its decoction may be used inwardly in loss of blood; some also prescribe it externally in Ruptures; the Juice or bruised Plant wonderfully stems Bleedings: The distilled Water is of small use, by reason of its scarcity of volatil Salts.

Plantain.

Plantain affords some acid Phlegm, and Urinous spirits, some Oyl and some Earth; it is much like in vertue to Purslain. The Juice, as well as Syrup and Decoction, is prescribed in Vomitings and Losses of Blood. Some boyl the Herb in Broths for the Bloody-Flux: It is an excellent Wound Herb, both inwardly and outwardly; it is put in cooling and cleansing Gargarisms: A Dram of the Extract is given in a Loosness. The distilled Water may be us'd for that of Purslain, and is of singular use in Inflammations of the Eyes.

Mastic

Mastic is a Gum-rosin that distills from the *Mastic*.
Mastic Tree: It is singularly commended in Coughs,
Catarrhs, Spitting of Blood, Vomiting, Looseness,
and loss of Blood; a Scruple or Dram thereof gi-
ven in the morning fasting, fortifies the stomach,
or you may boil half an Ounce in about three
Pints and a half of Water, till the half is wasted,
and give it for ordinary drink. It is put in all
Plaisters that are vulnerary and astringent, or de-
sign'd for the stomach: The Water drawn, as that
of Myrrh, with Brandy, is a good stomachick. Its
principles come near that of Turpentine, though
more intangled in Earth, and imbarra's'd by Acids,
by which means it proves more astringent.

A Frog is a Creature that has great store of *Frogs*.
Phlegm, volatil Salts, and Oyl, by vertue of whi ch 'tis
admirable in Hectick Fevers, and Phthisics. We may
make of it Broths and distill'd Waters. The Spawn,
a transparent Gelly found floating on Waters in the
Spring, being distill'd yields a Water abounding
with volatil Salts, of great efficacy in outward or
inward Inflammations, and all Fluxes of Blood; in-
wardly you may give six Ounces, and you may
also use it externally. *Tachenius*, who extolls it,
commends it for the Gout: Some, least it should
corrupt, run it through a Bag in a cold place,
with a little Allum. But I think the Water di-
still'd in a well Tinn'd Allembick is much better.
Crollius his *Sperniola* is only some Powders be sprink-
led with it. Some recommend a Frogs Liver dri'd
against the Falling-sickness.

Coral.

-Coral is a Plant that grows at Sea bottom and
hardens when expos'd to the Air; it is absorbent
and defeats Acids. To reduce it to fine Powder
is all the preparation it needs: If you dissolve it
in Vinegar, or drain it with Acids it, forfeits the
wonted vertue.

A List of Medicines which stop the Terms.

Roots of:

Snake-weed
Comfrey
Tormentil

} *By Ounces in Decoction.*

Leaves of

Periwinkle
Knot-grass
Agrimony
Mony-wort
Plantain
Nettles
Cinqfoil

} *By handfuls in Decoction.*

Juices of

Plantain
Tarrow
Knot-grass
Purslain
Shepherd's purse
Nettles
Verjuice
Juices of Lemons
Of Berberies
Of Pomgrants

} *To four Ounces:*

} *To one Ounce:*

Seeds

Seeds of

Henbane	}	To one Dram in Emul- sions.
Poppy		
Purflain		
Lettuce	}	To two Drams in E- mulsons.
The four cold Seeds clear- sed		
Sealed Earth		
Yellow Amber	}	To one Dram.
Bone of the Cuttle Fish		
Mastic		
Moss of human Skull, to half a Dram.		
Opium, to two Grains.		
Walnut Flowers, to a Dram of the Powder in VVine.		

Peels of

Pomgranats	}	To a Dram.
Citrons		
Oranges.		

Flowers of

Pomgranats	}	To a dram.
Dry Roses		
Coral prepar'd, to a Dram.		
Allom, to half a Dram inwardly.		
Nitre to half a dram, in about quart of Ptsane.		

Chymical Remedies.

Acid Spirits.
Diaphoretick Antimony.
Laudanum.
Crystal Mineral.

Distill'd Waters of

Frogs Spawn.
Plantain.

Knotgrass.
Yarrow.

Forms of Receipts.

Tincture of Roses.

Let two handfuls of rose leaves infuse twenty four hours in about a pint and a half of water, wherein you have put a dram of Spirit of Vitriol: This Tincture is very good in Diseases requiring astringents, and where the Blood is too thin, especially in Loosenesses, and Fluxes of the Terms; a glass of it may be given at any time, two hours after eating, fasting two hours upon it.

Helideus's Pouder of Turtle, describ'd by
Forestus.

Take a Turtle embowell'd and wash'd in red Wine and Rose-water, put an ounce of Mastick into its Belly; when you have sew'd it up, roast it, basting it with Rose-vinegar; keep the fat that drops from it; and when it is well done put it in a glass vessel, Philosophically luted, and dry it in an Oven. Give a dram of the powder in Plaintain-water, and with the fat anoint the region of the Reins, Pubes and Groin.

Pouder of Spertiola:

Take of Mastick, and Male Incense, of each two ounces, Orange-peel and seal'd Earth, of each half an ounce; being well pulveriz'd, make a Paste with Frogs-spawn, and in a dish covered with paper dry it in the shade: This method must

must be repeated to the thirtieth time, and after add fifteen grains of Camphir beaten into Pouder with Spirit of Wine. This Pouder may be given from five to eighteen grains in Plantain-water, or that of Frogs-spawn, to stop the Terms, Spittings or Fluxes of Blood. I prefer this to that of Crolius, because the Myrrh and Saffron will undoubtedly increase the Flux of Blood, and especially that of the Womb: Both the one and the other, mix'd with the Water of Frogs-spawn, outwardly, cure Gangreens, Whitloes, St. Antonie's Fire, &c.

Ludovicus Septalius his Decoction.

Take the rinds of three sour Oranges, something greenish, slic'd in little pieces, boyl them in seven pound of water, to a third part; add towards the end a handful of Mouseear. Strain the Decoction, and after extinguish in it a red hot Iron: Eight ounces of this taken in the morning, as the Author pretends, will wonderfully stop the immoderate flux of the Terms, providing they come not from Excoriations and Ulcers of the Womb.

Lindanus's Pouder.

Take red Coral prepar'd, yellow Amber, Bol-armoniack, and Dragons-blood, of each two drams; Plantaine Seed, calcin'd Borace, of each a dram; of Laudanum, four grains, Extract of the Crocus of Iron, a scruple, and make a pouder; which with Syrup of dry'd Roses you make into an Electuary. This Pouder may be given three times a day; in the morning, after Dinner, and after Supper; Dose, a dram at a time: The Author affirms that with it he has cur'd many, and amongst these a Woman, who for three years had labour'd under a continu'd Menstrual Flux.

C H A P. IV.

Of Medicines which facilitate Labour, and bring forth the Dead Child, and After-birth.

THE effects mention'd in the Title, are so near allied, that we may say, what compasses one is able also to produce the other.

*What must
be done be-
fore La-
bour.*

Before Labour emollient Baths made with Mal- lows, Marsh-Mallows, Branc-Ursine, Melilot, Cammomil, &c. are of use to loosen the parts and make 'em yield to the endeavours of the Child and Mother; the Pubes and Vagina may also be anointed with Oyl of Lillies, Camomil, or Lin- seed, &c.

Oftentimes it falls out that Child-bed Labour is protracted by reason of much Matter, or Wind contain'd in the great Guts; in this case an Emollient Glyster, with some carminative and sharp Medicines, has often had the desired success.

*Remarks
on the
use of
Medicines.*

When all these things prove ineffectual, if the Birth is in a right posture, the Orifice of the Womb open, and the Water hath begun to run, we must give such inward Remedies as increase the strength and spirits of the Mother and Child: But because such things may provoke Sweat, and thereby too much weaken the Mother, we may give at first, a mixture of Oyl of sweet Almonds, White Wine, and some Syrup; as also Alchermes mixt with Saffron: afterward we may
use

use Cinamon, and its Preparations, Dittany of Crete, Birthwort, Mugwort, Savin, Sage, Lavender, Pennyroyal, the Liver of an Eel, or Viper, and all such Plants as agitate the Blood and Spirits: Among Chymical Remedies we reckon the Spirit of the Secondine, Oyl of Amber, Oyl of Cinamon, and its Water: And in fine, all such things are proper here, as excite the Terms, by moving the Spirits; as Borace, Castor, Myrrh, Spirit of Salt-amoniack, &c.

We may also here recount such Medicines as vehemently shake the Fabrick of the Body; so ^{Effect of} sneezing ^{Medicines.} Medicines being given, by the sudden shock, have oftentimes brought happy delivery. Wherefore *Hippocrates*, §. 5. *Aph.* 35. says, if a Woman in hard Labour Sneezes, it is good.

Sometimes Vomitives have had the same effect, ^{Emetics.} Above all some commend a Draught of the Husbands Urine; but if the Child is alive, such things are not to be rashly us'd.

Crude Mercury taken inwardly, may hasten the Delivery, by its weight and Fluidity.

I could here recount a great many Remedies; but they all operate as these we have already nam'd: Such are Horse Dung steep'd in Wine, *Aurum Fulminans*, recommended by *Borellus* in his Observations; the Liver and Gall of an Eel in Pouder, which is a Secret of *Van Helmont's*, and the Stones of a Horse; all which work by moving the Blood and Humours.

An Oyntment make up of Serpents Skins, Bears Grease, and liquor of Crabs, is commend- ed for external use, this operates as Emollient. *Bartholine* cries up a Girdle made of a Mans skin Tawed, as wonderful against Vapours, and good to facilitate Delivery: But I am of opinion that all Girdles are alike in Vertue.

The stories of the *Ætites* or *Eagle-stone*, I take to be fabulous. Their Patrons alledge that one tied to the Thigh will cause a speedy Delivery, and the other dry'd and apply'd to the Head and Belly, will produce the same effect; But to be plain, it seems they were ignorant of Physick, and ascribed effects to Causes with which they have no affinity.

Tho we may use the Medicines before recited, as well to expell the Dead-birth, as to assist in bringing forth a live Child, yet in the first case we may increase their force by adding Remedies of sharper Nature. Thus if we use Baths, besides Emollients we may add such things as irritate, as Penny-royal, Mugwort, Savine, &c.

External Remedies.

Fomentations may be made with Serpents Grease and Coloquintida, and appli'd to the Belly, to cause some motion in the Muscles of the Abdomen. Pessaries may be made of Galbanum, Gum ammoniac, Gall of a Serpent, Coloquintida, &c. You may Fumigate with Myrrh, Castor, Galbanum, Asses hoof, or putrified Grapes; the Spirit of Sal-ammoniac, and drops of Antimony, may be put up unto the Womb, with *Glaubers* Instrument, or with a long neck'd Vial. Inwardly all such things may be given as facilitate hard Labour: In this case we need not scruple to use Emeticks; yea when all other Remedies have fail'd, we may provoke vomiting with *Mercurius Vitæ*. A dram of the Pouder of the Secondine, given in Cinnamon Water is much esteem'd, as also Borace and Savine. When all Remedies prove useless, and the Child tho dead is in a right posture, *Bartholine* in his Anatomical History proposes to press strongly the Belly with a round piece of Wood or Tin, which he pretends will expel the Child: This he says reliev'd one whose condition was desperate: And if nothing will do, the Child must be dawn forth with Instruments, either whole, or, if its posture be cross, by pieces.

As for the After-Birth retain'd we have nothing new to add. The Medicines which bring it away, are the same with those that expel the Child whether dead, or living, and operate in the same manner.

If the Secondine be tore or remain in the Body, it causes bleeding, upon which account we must take care to mix Astringents with other Remedies, lest the bleeding be inflam'd. To this purpose *Etmullerus* describes a Pouder made up of two scruples of burnt Harts-horn, roots of Bistort, Borace, Cinnamon and Saffron, of each half a dram; for two Doses, to be taken in Confection Alkermes or Cinnamon Water. When the Secondine is expell'd, the Bleeding for the most part ceases.

Because we have hitherto said nothing of *Borace*, we shall here take notice, that it is a mineral Salt imported from *Persia*, which we purifie by dissolution and filtration: Its colour comes near to that of Sal-gemm: It helps the melting of Gold, and is given inwardly from six grains to a scruple, to provoke the Terms, to open, unlock, and to expel the dead Child and After-Birth.

A List of these Medicines.

External Medicines.

Emollient Baths
Fomentations
Pessaries
Fumigations



of which we shall give
Receipts.

D. d 3

M.

Inwardly.

Emeticks

Sneezing-Powders.

Penny-royal
 Dittany of Crete
 Savine
 Mugwort
 Sutherlandwood.

Leaves of

} in Decoctions.

} by handfuls in Decoctions.

Roots of

Briony

Birth-wort

} by ounces in Decoctions.

Cinamon, to a Dram.

Saffron, to two Scruples.

Flowers of Larks-spur, and Blew-bottle in powder
to a Dram.

Venetian Borace, from a scruple to half a dram.

Stones of a Horse in powder, to a dram.

Liver of an Eel pulverised, taken in any Liquor.

Powder of Secondine to a dram.

Horses's Dung, steep'd in Wine and strain'd.

Chymical Remedies.

Oyl of Amber, to two drops.

Cinnamon Water to three spoonfuls.

Essence of Cinnamon, to four drops.

Fluxer Proprietatis without Acids, to a Scruple.

Water of Mugwort to four ounces.

Spirit of Secondine, from thirty to forty drops.

Forma

Forms of Receipts.

A sharp and Emollient Bath, to expel the Dead Birth.

Take Roots of Long-Birth-wort, Briony and Marsh-mallows, of each two ounces; leaves of Mallows, Marshmallows, Southernwood, Savin, of each two handfuls; Fenugreekseed, and Linseed, of each a handful; boil all in a sufficient quantity of Water: Wherein let the Woman bath her self to the Navel: But if the Child is alive, keep out the Savin.

A Linament to anoint the Pubes in hard Labour.

Take the Flower of Linseed, and Fenugreek-seed, of each an ounce and a half; Oyl of Amber, half a dram; Peruvian Balsam, two drams, mix them, and make a Liniment.

A Clyster which expels a dead Child or After-Birth,

Take Leaves of Mallows, Branc-wrsin and Mugwort, of each an handful; Roots of White-Lilies an ounce, boil all in water, and in a pound of the Decoction dissolve half an ounce of the Hiera of Coloquintida, and as much of Hierapicra, an ounce of Benedictum Laxativum; and an ounce and a half of Linseed-oyl.

Spirit of Humane Secondin.

Take the After-birth of a Woman, with all the Membrans being cut pretty small, put it in a Vessel which must be well stop'd, and set for a month in a Balnum Maria, in which time it will be almost all dissolv'd to a very stink-

ing water, which must be strain'd, and distill'd in *Balneum Mariae*; the dose of the Spirit from thirty to forty drops; It helps in difficult Labour, brings forth the dead Child and After-birth; expells the suppress'd *Lochia*; and also cures the *Epilepsie*.

A Pessary to bring away the Dead Child.

Take of *Galbanum*, and *Gum-ammoniac*, of each two drams; *Black Hellebor*, and *Coloquintida* in powder, of each half a dram; being all pulveriz'd, suck 'em up with a little Cotten dip'd in oyl of *White Lillies*, which you must cover with a piece of *Linnen-cloath*, and make into the form of Pessary.

A Powder to facilitate Labour, and expel the dead Child.

Take two drams of *White Amber*, a dram of *Venetian Borace*, a dram and a half of *Myrrh*, half a dram of *Saffron*; beat them into a fine powder, whereof you may give one dram, in one spoonful of *Cinnamon Water* mix'd with two of *Mugwort*, to be drunk hot.

CHAP. V.

Of Medicines which prevent Miscarriage,

IN order to prevent Abortion, we must first know the Cause thereof; and then give such Medicines as may remove it, unless the Miscarriage is already begun, in which case such remedies are improper, as being apt to retain the dead Infant in the Womb.

Abortion may be occasion'd by violent Passions, such as Grief or Anger, wherein the Blood and Spirits are so briskly mov'd, that they impart no Nourishment to the Fetus: and the violent agitation of the Diaphragm, and Muscles of Respiration, which almost ever accompanies such Passions, helps to push down the Child.

Causes of Abortion

Motions of the Body also are ordinary causes of Abortion, and we may easily imagin that by Joulting, Leaping, Singing, &c. the Child may be loos'd from the Womb, if it is not very strongly tyed.

Spirituos and Aromatick Food, which makes a strong Fermentation in the Blood, may produce the same effect, by hurrying too much Blood into the small Vessels of the Fetus; from whence may follow a Rupture of the Vessels, and the death of the Infant. Also a straining hard to void the hardned Excrements of the Belly, the Bloody-flux, Colicks, disorders of the parts adjacent to the Womb, Coughing, Sneezing, &c. may all cause Abortion.

W^s

We may here also reckon up the taking of Medicines that expel the Terms, and whatever occasions much loss of Blood, and kills the Fetus by cutting off its Nourishment.

Before we administer Medicines to prevent Miscarriage, we must find out the Cause. If passions, whether Anger or Grief, do threaten Abortion, we must appease them; if External Motions, we must advise Rest, which is one of the greatest and surest Remedies. If the belly is Costive, it must be opened, and kept loose by Clusters, and Laxative Ptisans; If any other indisposition threatens Abortion, it must be removed in order to effect the Cure.

But forasmuch as the Sharpness of the Bile, and Fermentations of the Blood thence insuing, are the most ordinary causes; we may prevent these at first by forbidding the use of spirituous Food, injoyning a cooling Diet, bleeding in the Arm, laxative Ptisans, and giving Medicines to quell the Motions and Fermentations of the Humors, whether by cramping their volatile Salts, or destroying their ferments: For these intentions we may use Vervain, Plantain seed, Tormentil, Grains of Kermes, river Crabs, Ivory, Coral, Mastick, Incense, Leaf-Gold, *Spodium*, Bistort, Quinces, and many other Astringents; and their preparations, such as distill'd water and extract of Vervain, the confection and Syrup of Kermes, both very much esteem'd; broth of Crabs, their liquor made by stamping them with Wine: powder of Crabs dry'd in an Oven: *Potervius* cries up this powder, and orders the Crabs to be put alive into a bottle, and set in the Oven, when the bread is taken out. When they are dry and reduc'd to powder he advises to take it frequently together with victuals: But forbids to exceed half an ounce a day. Ivory and Harts-horn afford each of 'em a Gelly, which may be exhibited either by its self, or dissolv'd in broth.

Externally

Externally, some are wont to hang about the neck, the Aigle-stone; but I never could see either the reason of such practice, or the benefit that accrues from it. *Zacutus Lusitanus* recommends a Girdle of a Sea-horse-skin, or in want of that, one of a Wolf's skin.

We use to apply to the Pubes with Ginger-bread Honey and Pouder of Cloves; especially when pain and wind molest the belly.

Sometimes we apply with Tow to the Navel Cataplasms of Frankincense and the whites of Eggs, as hot as they can be indur'd.

Bags of hot herbs are also not improper for the same purpose. Astringent Plaisters may be made of *Acacia*, *Hipocistis*, Snake-weed roots, &c. or we may mix the Plaister for the Womb with the Rupture Plaister: But, as *Riverius* observes, 'tis to be fear'd the Kidneys may be over-heated, or attack'd with gravel pains: and therefore such Plaisters must not be long upon the Reins.

Zacutus Lusitanus, *Riverius*, and several others recommend Cauteries applied to the Arms and Legs, as a preservative against Abortion. These Medicines strain out the sharp humours which ferment the Blood and put it into violent motions. Thus they destroy one of the chief and most Common Causes of Abortion: For some Women are so apt to be disorder'd by the violent motion of their blood, that unless they lye in bed all the time of their being with Child, they would never be able to hold out their Reckoning.

A List of such Remedies as prevent Abortion.

External Remedies.

THE skin of a Sea Horse.

A Wolf's Skin.

Gingerbread applied.

Frankincense.

Mastic.

Tormentill Roots.

Snakeweed Roots.

Vervain Leaves.

The Plaister for the Womb.

The Plaister against Ruptures.

Internal Remedies.

Spodium, to two scruples.

Leaf-Gold, to fifteen grains.

Red Coral to a dram.

Mastic to a dram.

Frankincense to a dram.

Crabs eyes to half an ounce a day.

Vervain Water, to six ounces.

Its Extract, to a dram.

Plantain-seed, to a dram.

Chermes-berries, to a dram.

Snakeweed Roots, to a dram.

Tormentil Roots, to a dram.

Plantain Water, to four ounces.

Horse-tail Water, to four ounces.

Knotgrass Water, to four ounces.

Confection Alkermes, to a dram and a half.

Ivory in Powder, to two scruples.

Syrup

*Syrup of Quinces to an ounce.
Gentle Purgatives.
Moderate Bleedings.*

Forms of Receipts against Abortion.

A Potion to prevent Miscarriage, described by *Riverius*.

Take two leaves of Gold, a dram of Spodium, the Sperm of three new-laid Eggs, mix all together till the Gold be well divided, then add half a Glass of White-wine. This Remedy is to be exhibited in the morning three days together. The following Cataplasin being applied in the meantime.

A Cataplasin.

Take two ounces of Frankincense pulveris'd, five whites of Eggs, beat 'em up over hot coals, and add a little Turpentine to hinder its sticking close; apply it to the Navel as hot as can be endur'd, and that both morning and evening, during the three days use of the foregoing Medicine.

These Remedies are only useful when the *Fetus* is not loose: for if it be, all Medicines of this nature will only serve to make the labour harder. And therefore in such cases we are so far from recommending Astringents, that on the Contrary expelling Remedies are always made use of.

Hernius his Cerote against Miscarriage, invented by *Bellocatoni* an Italian.

Take Bloodstone, Eaglestone, and Frankincense, of each half an ounce; Mastic and Ladanium of each an ounce; three drams of Sumack seed; Galbanum half an ounce; and a sufficient quantity

Medicines which hinder Miscarriage.

ty of Rosin. Pound, mix and make a Cerote according to Art, to be applied to the belly and Os-sacrum. Heurnius cries up this Remedy mightily, for in the case of Miscarriage he prefers external Remedies to the internal; and above all esteems those which are applied to the lower belly. He says, if the danger of Miscarrying were accompanied by a putrid Fever, Astringent internal Remedies would only heighten the Fever, However, I think 'tis hard to make such a Cerote as this without adding some Oyl.

Heurnius his Electuary to prevent Miscarriage.

Take two ounces of the Marmalade of Quinces, and as much of Citron peel preserv'd; two ounces of Dates cut small; Conserve of Roses, Aloes Wood, Cinnamon, Cloves, of each a dram: Make an Electuary with the Syrup of Citrons. Dose three drams in a morning.

An Opiat against Abortion.

Take Chermes berries, Red Coral, and Dates, of each a dram; Vervainseed, half a dram; Pulverise all, and add two ounces of the Conserve of Roses, and as much of the Syrup of Quinces as sufficeth to give it a due Consistence. Dose a dram in a morning; drinking above it half a Glass of red Wine.

C H A P.

C H P A. VI.

Of Remedies expelling the Loches.

THE Lochia are a mixture of blood and humours voided from the Womb after delivery. Their suppression will occasion dismal disorders. Sometimes Nature changes her Course, and empties the same humour by some unwonted passage, sometimes by Stool, sometimes otherwise. Upon which account 'tis oftentimes dangerous to recall the Loches to the Womb, when Nature is endeavouring to expell 'em another way.

All Remedies mention'd above for expelling the Terms are proper on this occasion. Especially Clysters of Aromatical and Carminative Ingredients, such as Penny-Royal, Chamomil, Savin, &c.

Inwardly we make use of such Medicines as raise a fermentation in the blood, such as the Decoction of Penny-Royal, Red-pease, powder of Saffron, Myrrh, Cinnamon. The Decoction of Orange-peel, tho it moderate the flux of the Terms, yet it excites that of the Loches, and I believe in some cases might do the same office to the Terms, after the manner of other Absorbents. In short all Volatil and Aromatical Ingredients recommended for promoting the Terms, are very useful in retrieving the flux of the Lochia. So that 'tis needless to descend further to particulars.

A List of the Remedies that expel the Lochia.

Internal Medicines.

Mugwort
Feverfew
Sage
Marjoram } *In Decoctions to a handfull.*
Myrrh, to two scruples.
Saffron, to a scruple.
Castor, to half adram
Powder of Vipers, *Eel Livers*, to a dram.
Oyl of Savin
Cinnamon } to four drops dissolv'd.
Cloves
The Spirit of an Afterbirth, to half a dram.
Powder of Afterbirth to a dram.
Oyl of Amber, to twelve drops.
Mugwort-water
Water of Feverfew } to six ounces in Pa-
Meadsweet-water. } tions.
Carduus Benedictus water
Spirit of Juniper } to an ounce.
Treacle-water }

External Remedies.

Penny-Royal
Wild Marjoram
Feverfew
Mugwort
Savin } *in Clifters to a handfull.*

Oyls of Amber }
 Guaiacum } in Liniments applied to the parts.
 Tartar }
 Spirit of Sal Armoniac }
 Drops of Antimony } in Pessaries or Fumiga-
 Coloquintida } tions.
 Bull's Gall }

The Forms of Receipts.

Etmullerus his Decoction against the suppression
 of the Lochia.

Take a handful and half of Chamomil-flowers, a
 dram of dry'd Orange Peel. Boyl' all in a suf-
 ficient quantity of Water.

Etmullerus his infallible Powder for the same
 purpose.

Take a scruple of Diaphoretic Antimony, half a
 scruple of Zedoary, eight grains of Myrrh, fif-
 teen of Cinnamon, and five of Saffron. Make
 a Powder for two Doses, to be exhibited in the
 foregoing Decoction.

C H A P. VII.

Of the Remedies that moderate the flux of
 the Lochia.

THE Lochia are moderated by lessening the *The fer-*
 fermentation of the Blood. For which end *mentation*
 we use Astringents, Acids, and other in- *of the*
 gredients recommended above against immoderate fluxes. But by reason that some peculiar *Blood must*
 causes, such as the Serosities of the blood, or the *be check'd.*
 opening of the Arteries in the bottom of the
 Womb, may sometimes occasion an excess of the
 Loches, I shall therefore inquire into such Re-
 medies as are reckon'd Specifics.

Ee

Plantain

Incrassating Astringents.

Plantain, Purslain, Knotgrass, Horsetail, purple flower'd Loasrise, Quinces, Coral, Bloodstone, Amber, Astringent Crocus of Steel, Water of Frogs-spaun, and the like, do only serve to thicken the blood, or imbibe the Acid moisture that opens the orifices of the vessels of the Matrix.

Absorbents

Poterius his Antihectic, Diaphoretic Antimony, and Seal'd Earth, are recommended upon the same account.

Notwithstanding that Sudorifics put the blood in motion, yet they oftentimes stop an immoderate flux, by promoting the transpiration of the Serum that opens the vessels, and drinking in or evacuating the Acids.

Narcotics.

Opium, Laudanum, and all other Narcotics are oftentimes of sovereign use when all other things prove ineffectual. The Tincture of Roses with the Spirit of Vitriol or Sulphur, crude Allum from half a dram to two scruples, and several Acid Astringents, are particularly useful to thicken the blood; and keep up its consistence.

If inward Remedies be successless we may make astringent Injections for the Womb, of Plantain Water with a little Bole-Armoniac, or Sugar of Lead. Externally, we may apply the Water of Frogs-spawn to the Pubes, or the Spawn it self mix'd with a little Vinegar.

Horsetail.

Horse-tail by its Analysis affords a great deal of Acid Spirits; a few urinous Spirits, little Oyl, and a great many Ashes, from which we take a Saline Salt. The Decoction and juice of this Plant have a vulnerary vertue in External use. They are also us'd in Phthisics, Spittings of Blood, immoderate Fluxes of the Terms or Loches. Sometimes upon such occasions we prescribe a dram of the Pouder of the Root of this Plant, which makes the blood thicker. The Distill'd Water is little worth, for want of volatile Salts. If we dissolve the Saline Salt into it, it may become serviceable.

Shep.

Shepherd's Purse affords little acid, a great deal of volatil Salt, some Oyl, much Earth, and some Lixivious Salts. 'Tis a Vulnerary both inwardly and outwardly. Its Decoction and Juice is successfully us'd to stop the immoderate Fluxes of the Terms or Loches, Spittings of Blood; and above all in a pissing of blood, where it passes for a Specific. Its Alkalim parts make the blood fluid, and perhaps 'tis upon that account that it is recommended against Fevers. Some Authors find fault with its distill'd water: But I can't see their reason. For when it stops bleeding, it does not operate by virtue of coarse Astringent parts, but by defeating the acid ferments, and making the blood liquid, and so quickning the Circulation of the blood, whose stoppage was the Cause of the bleeding. Therefore, as I take it, since this Plant has such store of volatil Salts, its distill'd Water must needs be good. Externally we joyn this Plant to Cataplasms to be applied to the Pubes to stop the *Lochia*.

Blood-stone partakes of Iron, and, as *Ludovic* says, may serve in the room of the Astringent Crocus of Steel. When 'tis reduc'd to fine Powder we give one or two scruples in Potions against bleedings and Dysenteries. Some alledge that bloodstone sublimated with Sal-Armoniac gives *Paracelsus's* Aroph, because it affords an Aromatical Essence of a Golden Color, which cannot be obtain'd from Vegetables, and therefore might be call'd *aro* (as if *aromat.*) and *Ph.* (as if *Philosophorum*). *Etmullerus* says this Stone partakes of Iron and Lead, and accordingly alledges a Counterfeit one may be made of Sugar of Lead and Vitriol of Steel.

A List of the Remedies that stop an immoderate
Flux of the Loches.

Absorbents.

<i>Diaphoretic Antimony</i>	}	<i>to a dram in Potions.</i>
<i>Poteries his Antihectic</i>		
<i>Bezoar Mineral</i>		
<i>Prepar'd Coral</i>		
<i>Crabs-Eyes</i>		
<i>Lemnian Earth</i>		
<i>Bole-Armoniac</i>		
<i>Amber pulveris'd</i>	}	
<i>Prepar'd Bloodstone</i>		

Astringents.

<i>The Distill'd waters or Decoctions of Shepherds Purse</i>	}	<i>from four to six Ounces in Potions.</i>
<i>Plantain</i>		
<i>Horsetail</i>		
<i>Knotgrass</i>		
<i>Loofstrife</i>		
<i>Purslain</i>	}	
<i>Of Frogs Spawn</i>		

to six ounces.

Sugar of Lead from ten to twenty Grains in Injections.

Lapis Medicamentosus to a scruple in Injections.

The Styptic Salt of Vitriol, inwardly to twelve grains, in Injections twice as much for three times.

Forms of Receipts.

A Potion.

Take six ounces of the Water of Frogs-Spaw. Dissolve in it six grains of Sugar of Lead, and an ounce of the Syrup of dry'd Roses.

Take a dram of Coral, as much Antihectic Powder, half a dram of prepar'd Crabs Eyes. With a sufficient quantity of Marmalade of Quinces make an Electuary for five doses.

C H A P. VIII.

Of the Remedies that are good against the Whites.

THE White Flux is a very Common Disease. It takes rise from a Serosity or Crude Chyle in the mass of Blood, which separates it self in the Glandules of the Internal or External Orifice of the Womb. It is more or less troublesome in proportion to the sharpness of the Serum. *The causes of the Whites.*

Sometimes this Disease is occasion'd by the Stagnation of the Liquor which Women are wont to cast forth in the Act of Enjoyment. By its stay it becomes acid, and causes a relaxation of the parts, so as to give way to the serous parts of the Blood.

As abtaining from injoyment does frequently give rise to this Disease, so marriage oftentimes remedies it.

When the running matter is somewhat sharp and tickling, then acids are very serviceable. Such are the Tincture of Roses with the Spirit of Vitriol; Juices of Limons, Citrons, &c. *The use of Acids.*

But when the humour is acid, then we make use of Turpentine, which covers the acid parts with its glutinous particles; together with Absorbents, such as *Poterius* his Antihectic, Diaphoretic Antimony, Amber in Pouder, Coral, Crabs-Eyes, Cuttlebones, Seal d-Earth, &c. *Of Absorbents and Balsamic Medicines.*

Besides, we make use of Astringents, such as the Dead-Nettle, the Decoction of Willow tops, the Water of its flowers, Mint Water, &c. These operate by drinking up or promoting the transpiration of the acid ferments. But their efficacy is scarce considerable unless the Stomach and first passages be clear'd by a Gentle Vomit, or Purges of Rhubarb, and some *Hydragoga*.

Of Sudorifics.

If all these Remedies be ineffectual we must have recourse to Sudorifics. Such are Bayberries, Clary, Marjoram, Angelica, Burdock-Roots, Guaiacum-wood, Sassafras, Mastic-wood, and several others.

The use of Diuretics.

Diuretics are also very proper. Such are the Decoction of *Asarum* roots in Water, or that of Parsly-roots, and several others which mortifie the acids, and push the Serum to the Kidneys, especially when the flux is purely serous and not much Tinctur'd.

Astringents.

As for the Astringents, such as Plantain and Purslain-Water, Seal'd-Earth, the Conserve and Tincture of Roses, &c. these I say are not to be us'd till the first passages be well clean'd. And besides we must take care we do not exhibit 'em about the time of the menstrual course.

As Internal Astringents are very improper in the menstrual period, or before the first passages are clear'd; so External Astringents are much more such. These two cases apart, they are very serviceable. *Forestus* cries up the Decoction of Periwinkle with Allum, with which he orders the belly and Pubes to be rub'd. Some recommend the Smoak of oake; others that of Mastic, Frankincense, &c.

When the disorder lies in the the Glandules of the Internal Orifice and Vagina, we may prescribe injections of Plantain water, and Sugar of Lead; remembring still the precautions now mention'd.

Minerals.

Moreover, we may likewise make use of all the Sudorifick preparations of Mercury, Antimony, Crystal, Lime water, exhibited in Milk or Sudorific Prisers, or administred by themselves in the morning while fasting; according as we design to promote sweat, or to imbibe the acids, or to qualifie the sharp particles.

The Lignor of Lime described above, given from four drops to ten in Pellitory-water, is an admirable Remedy,

There

There are two preparations of admirable efficacy in this Disease, which I cannot pass by. The first is made use of in whites proceeding from an acid; the second in those where sharp Salts are interlac'd.

A Preparation for the Whites.

The first is this. Take equal parts of Crude Tartar, Nitre, and Allum; melt and Calcine 'em together. Then let 'em dissolve into a liquor in a Cellar: Of which joyn half an ounce to a quart of red Wine: And exhibit three or four Glasses a day.

The second runs thus. Take an ounce of Allum *Another.* Calcined, pour upon it half a pint of the clarified Juice of Limons. Then evaporate the moisture: And dissolve the Poudre in a pint of Water, adding two drams of purified Nitre. Then Filtrate, Evaporate and make Crytalls. This Salt is given to half a dram in some convenient Vehicle.

Among Specific Medicines I shall only Pick out Sweet-scented-Clary, Oak-wood, Cuttlebones. These I purpose to describe a part.

Clary gives some acid Phlegm, some urinous *Clary.* Spirits, some Oyl and a Lixivious fix'd Salt. We make a Tincture or Essence from its flowers which is much recommended in the white flux of Women. Some cry up the Decoction of the whole Plant in the same Disease: Others take the Plant, mix it with fresh-butter, and let 'em rot together: Then they melt and strain out the butter, with which they anoint the *Pubes* and privy parts. This Ointment is also us'd for pains after delivery. The Seed of this Plant is good to clear the Eyes.

Oak-wood affords a great deal of acids and Oyl: *Oak.* The leaves give urinous Spirits besides. It seems, the predominant Salt in this Plant is a vitriolic Salt, mix'd with Alkalies. The shells of the Accorns pulveris'd, and administred to 15 or 20 grains in Wine, are an excellent Remedy in a Dysentery, pissing of blood, and the Womens Whites.

E e 4

Some

Some choose to tost the Accorns or Cups and exhibit half a dram, or two scruples, against the same distempers. Others content 'emselves with the Decoction of the Leaves which is known to be Vulnerary and Astringent. They say the Mistletoe and Polypody of the Oak are very proper against Convulsions.

Cuttlebone is a powerful Absorbent. Sometimes 'tis calcin'd. Sometimes we exhibit it in Powder without any preparation. Dose, from one to two scruples. 'Tis us'd with success in Claps and Womens Whites. Oftentimes we mix it with Electuaries for cleaning the Teeth and fortifying the Gums; or with Pouders to be blown into the Eye, against Inflammations or Cataracts.

A List of the Medicines proper for this occasion.

<i>Asarabacca Roots</i>	}	<i>See the Emetics.</i>
<i>Emetic Tartar</i>		
<i>Bryony</i>		
<i>Rhubarb. Myrobalans. Turbith.</i>	}	<i>See the Purgatives.</i>
<i>The Antiseptic Powder</i>		
<i>Diaphoretic Antimony</i>		
<i>Bezoar Mineral</i>	}	<i>See the Sudorifics.</i>
<i>Guaiaicum</i>		
<i>Sassafras</i>		
<i>China</i>		
<i>Juniper</i>		
<i>Rosemary</i>		
<i>Parsley Roots</i>	}	<i>See the Diuretic List.</i>
<i>Smallage Roots</i>		
<i>The Decoction of Asarum in Water</i>		
<i>Turpentine</i>		
<i>Juice of Citrons</i>		
<i>Spirit of Vitriol</i>	}	<i>From half a dram, to a dram in any Conserve.</i>
<i>Amber</i>		
<i>Coral</i>		
<i>Seal d Earth</i>		
<i>Mastic</i>		
<i>Cuttlebones</i>		
<i>Osteocolla</i>		

Clary

Clary } In Decoctions.
 Oake-leaves }
 Accorn Cups, to a scruple in Powder.
 Crude Allum, to half a dram.
 Astringent Fumigations.
 Astringent Fomentations.

The Forms of Receipts-

Amatus Lusitanus his Receipt against the Whites.

Take the white of an Egg, beat it up with Rose-water, and let the Patient swallow it. The Author says he has cur'd many Women with this Remedy. If it be so, to be sure its vertues lye in the Astringent Particles of the Rose-water, and the Glutinous parts of the whites of Eggs. I believe with *Etmullerus* that some Mastic added would improve the Receipt. But I question much the vertue of this Medicine. For I find the same Author orders the yolks of Eggs to be beat up with Rose-water in an immoderate Flux of the Terms; And I cannot see why the red colour of the Terms should oblige him to prescribe the yolks rather than the whites, which he cries up so much in a parallel case. And therefore if what he says be true, why should not the whites of Eggs be serviceable against the flowing of the Terms, and the yolks against the white flux?

Boetius his Remedy.

Take half a dram of Plumous Allum, two drams of Sugar, and four spoonfuls of Brandy. Mix for two Doses. Plumous Allum is very sharp and therefore must be us'd in small quantities.

Zechius his Electuary.

Take Gum Tagacanth and Arabic of each two drams; Harts-horn, the ashes of Eggshells, Anniseed and Amber, of each four scruples; Honey of Roses a sufficient quantity: make an Electuary, and exhibit half an ounce two hours before

before Meals; and four ounces of Plantain-water mix'd with a little Wine to be drunk above it.

A Potion against the Whites.

Take six ounces of the Decoction of Oakleaves, and a dram of a Hare's Gall: mix and continue the use for eight days. This Remedy is much esteem'd by its Author. Doubtless its vertue must lie in the styptic parts of the Oak.

CHAP. IX.

Of Carminative Remedies or such as dispel Wind.

What 'tis
that hin-
ders the
dispelling
of Wind.

HAVING dispatch'd the Remedies that evacuate humours, we come now in order to those which dispel Wind. The way how Wind is bred is accounted for elsewhere. In this place I shall only tell you, by the way, it would never occasion disorders were it not hemm'd in by tough parts. And that is the only impediment of its dissipation. Some may say, one Gut being blown up with Wind presses upon the rest, and so the Wind blocks up its own passage. But we must consider, the Guts cannot squeeze one another much; and if they did, Wind being so fluid a matter, would easily slip out. It may likewise be objected, that when one part of the Gut is enlarged by the Wind, it's two ends will naturally be straitn'd. But I answer; if the Wind were not hedg'd in by viscous matter it would not blow up or enlarge the Gut, but would gain its passage thro' a streight.

There are two sorts of viscous matter imprisoning Wind in the Guts. Sometimes a thick and Gluy Bile is in the fault. At other times indigested Chyle. Oftentimes there are fermentations in the Guts attended

tended by symptoms like to the Causes of Wind.

In all these cases Purgings is proper. But by reason of the violent pain that accompanies the Disease, and is apt to be provok'd & inflam'd by Purgatives; therefore we are oblig'd to joyn to them Carminative Narcotic Ingredients. Sometimes we join *Opium* to volatil Medicines, in order to mitigate the Contractive motions of the Spirits, which frequently give rise to a great part of the disorder. This *Cinnabar* of Antimony mix'd with *Opium* is a soveraign Remedy in some painful Colics.

If thicken'd Choler, or Irregular Fermentations occasion Wind, Acid Spirits are the most proper Medicines; particularly the Spirit of Nitre which *Sylvius* cries up on all occasions. In effect, it arrests the sharp particles of the Choler and fermenting salts; it breaks thro' their viscosity by vertue of its pointed parts, and procures room for the Wind to get out.

However, these acid Spirits are improper in Colics arising from slimy matter half Curdled, or from an acid and undigested Chyle. in such cases I would choose to make use of Carminatives which abound in Volatil, Sulphureous and Alcalin parts. Such are Cloves, Nutmegs, Sulphur, Mace, Cinnamon; Seed of Carrots, Caraways, Dill, Cummin, Fennel, Annise and Coriander; Spirit of Wine, Orange-peel, Speedwel, Groundivy, Chamomil, Clary, Elecampane, Garlic, Castor, Wormwood, Sperma-Cœti, and many others. I could instance in Colics caus'd by Acids and cur'd by such Remedies. Mr. Boyle tells us of a Colic occasion'd by the steams of Vinegar, and cur'd by the Infusion of Ground-Ivy in Brandy.

Clysters of the smoak of Tobacco are not improper. *Bartholin* describes the form of an instrument for that purpose, in the Century of his Anatomical Observations. We may also inject Clysters of the Leaves of wild Marjoram, Calamint, Stoechas, Rose.

Rosemary, &c: or else of Child's Urine. At the same time we may administer some drops of the oyl of Annise in *Spanish* Wine, and if we please may add two ounces of Emetic Wine to the Clyster. In short all Volatil Alkaline Remedies, are proper on this occasion. They break thro' the viscous matter by vertue of their Volatil parts, and imbibe the acids that gave rise to the Disease.

The principal Carminatives requiring Consideration here, are, Camomil, Mint, Bays, and Sulphur.

Camomil.

Camomil by Distillation gives an acid phlegm, Urinous Spirit, an Oyl and a Lixivious Salt. The Infusion of its tops is much esteem'd in a Wind or Nephritic Colic. 'Tis likewise administered in Pleurisies to procure sweat. Externally Camomil is much us'd in Cataplasms for Rheumatic and Arthritic pains. Its flowers given from one to two scruples are excellent against Feavers. *Morton* tells you he has put off several Feavers, with a mixture of these Flowers, Salt of wormwood, and Diaphoretic mineral, tho' at the same time they would not yield to the Jesuit, Bark. The Decoction of the Whole Plant is used in Clysters against the Colic.

Its distill'd Oyl, distill'd in a *Vesica* with Oyl of Turpentine, gives a blewish sort of Oyl, which we dissolve with Sugar in some Potion, and exhibit it with very good success in Colics. The Decoction of the tops in Wine are an admirable Potion against the after pains of Women: Or we may draw a Tincture from 'em for the same use, which will be yet more effectual and less unpalatable. Externally anoint the parts with the infusion of the flowers in Oyl.

Mint.

Mint is richly stock'd with volatil spirits and Oyl, and therefore is entitl'd to an Oily Volatil Salt. 'Tis by vertue of these endowments that it fortifies the Stomach, brings down the Terms, and dispels wind. 'Tis us'd both inwardly and outwardly in Decoctions. We may make from it

a Tincture, distill'd water, Extract, Syrup, and Conserve.

The Baytree affords some Acids, some urinous *Lavvels* Spirits, and a great deal of Oyl. In vertue it comes near to Juniper. Its berries are good to fortifie the Stomach, dispel wind, and expel the Terms or dead Child. Externally 'tis us'd in all Paralytick cases. We may give it inwardly by way of Decoction, Infusion, Tincture or Spirit. In malignant Fevers 'tis not amiss. If a malignant and Ardent Fever are complicated together, we mix the poulder of the berries with distill'd Vinegar: If the Fever be simple we only give the berries with Wine to procure Sweat. The Electuary of Bayberries is us'd in Clysters against the Colic; and the Oyl (by infusion) is of use in External disorders. The distill'd Oyl of the berries dissolved to five or six drops with Sugar in some liquor, is an admirable remedy in the Colic.

Brimstone is a mixture of Oyl and an acid. *Mr. Brimstone.*

Boyle distilled the Spirit of Vitriol with Oyl of Turpentine, and says he found in the neck of the Retort an inflamable Substance of the same sinell and Color with Common Brimstone. The natural Sulphur untry'd by fire possesses some Metallic parts, by vertue of which it ferments with some acids. The Oily parts of Brimstone qualifie it as a remedy against the Colic. 'Tis given in substance to two scruples, or boyl'd in Wine to two or three drams. 'Tis likewise of use to soften the sharp or acid humours that gall the Lungs, and accordingly is administred in an Asthma, difficulty of Breathing, Cough, and Phthisic. 'Tis also Sudorific, and strikes out the Scab. Outwardly 'tis employ'd in Liniments for the Scab.

Its noted Preparations are the flowers, the acid *Its flowers* Spirit, the Solution, Tincture, Milk, Salt, &c.

Take common Brimstone. Pulverise it. Put it into a *Cucurbita*, cover'd with another. With a gentle fire the flowers will rise to the top of the upper

upper Vessel, which must be lifted up now and then to take out the flowers as they come up. The vertues of the flowers are much at one with the Common Brimstone. If ye Sublime Brimstone with Nitre 'twill give white flowers.

*Rs Acid
Spiris.*

Kindle Brimstone and burn it. And place over it a large Glas Vessel like a Bell. The acid Spirit of the Sulphur will stick to it, and fall down upon a Vessel plac'd underneath. The *Campana* must be plac'd at a convenient distance, that the air may get in and continue the flame.

*Rs Dissol-
ution.*

Take an ounce of Brimstone Pulveris'd, and three ounces of the fix'd Salt of Tarter. Pour in water till it rise six fingers above the ingredients. Boyl or Digest the Liquor till it become red. Then strain out the Solution and exhibit a dram at a time. 'Tis good where acid humours afflict the breast.

*Rs Magi-
stery.*

Take the Solution of Sulphur : Pour into it some drops of distill'd Vinegar. 'Twill give a milk or Precipitate that falls to the bottom. Which must be wash'd and dried. Dose from five to twenty grains, in Phtisicks. *Quercetanus* alledges, a dram of it will purge.

*Another
Solution.*

There's yet another way to dissolve Brimstone, viz. with Quicksilver and water. I took notice of it elsewhere; and therefore shall go on.

*Balsam of
Sulphur.*

The Balsam of Sulphur prepar'd with Oyl of Turpentine is accounted for elsewhere. *Rulandus* his Balsam runs thus. Take an ounce of Brimstone in Pouder, half a pound of the Oyl of Wallnuts, and two ounces of Wine. Let 'em stand in digestion for eight hours upon a slow fire, stirring it often. Then Boyl till the Wine be wasted. 'Tis an Admirable Remedy for Ulcers and External Disorders.

Sometimes wind molests other parts of the body, besides the Stomach and Guts, and occasions many disorders : If it be lodg'd betwixt the Pleura and Intercoastal Muscles, it causes wandring pains upon
the

the Ribs. Sometimes it plants it self in the Bladder, Womb or Blood Vessels. In all these cases, the Diaphoretics and Carminative Medicines now mention'd are of excellent use, taken inwardly. They dissolve and disperse the gluy parts and consequently make way for the passage of the air.

Externally we make use of Cataplasms made up of Aromatic Plants, such as Wild marjoram, Penny Royal, Thyme, Sage, Marjoram, Bays, Pepper, Ginger, &c. We may likewise order Bags, Oyls, Linements and Fomentations for the same use. As if we mix'd Volatil Spirits with the Spirit of Wine, or Ardent Spirit of Juniper, and Volatil Oyls, such as those of Worms, Toads, Bayberries, &c.

A List of Carminative Medicines.

Leaves of Rue	}	In Decoctions a to handf. ul.
Mint		
Wormwood		
Ground-Ivy		
Speedwell		
Sage		
Thyme		
Chamomil	}	From half dram to a whole one in some liquor.
Roots of Masterwort		
Carline Thistle		
Angelica		
Zedoary	}	From a scruple to a dram in some liquor.
Seeds of Bishopsweed		
Caraway		
Heartwort		
Cumin		
Anis		
Fennel		
Dill	}	Flowers of Rosemary, to two scruples in some liquor.
Carrots, &c.		
Flowers of Rosemary,		Cina-

Cinnamon
Mace
Cloves } To two scruples in some Vehicle.
Castor to two scruples.
Garlic to one head.
Spanish Wine one Glass.
Opium mix'd with volatil ingredients to a grain.
Brimstone from one to two or three drams boyl'd in
Wine.

Chymical Medicines.

Cinnamon water to three spoonfuls.
Spirit of Wine, one spoonful.
Salt of Wine one spoonful.
Salt of Wormwood to a dram.
Anis } To a dram in some convenientt ve-
Cinnamon } hicle.
Waters of Carduus Benedictus
Baum } To five ounces.
Mint
Spirit of Nitre, to seven drops.
Extract of Juniper, to half a dram.
Emetic Wine, from one to two ounces in Chylsters.

FORMS

Forms of Receipts.
Sylvius his Carminative Spirit.

Take of Angelica Roots a dram, Masterwort and Galangal Roots of each a dram and a half; leaves of Rosemary, Marjoram, Garden Rue, Basil, tops of Lesser Centory, of each a handful; Bay-berries, three drams; Seeds of Angelica, Lovage, Anise, of each half an ounce; Ginger, Nutmegs, Mace, of each a dram and a half; Cinnamon, six drams; Cloves, Orange peel, of each a dram; Chop 'em all together and reduce 'em to a gross Powder; upon which pour forty Ounces of the Spirit of Spanish Wine; Let them digest two days, then distill off the Spirit till the Ingredients become dry. Pour back the distill'd Spirit upon the same Ingredients; Let 'em digest again two days, and by distillation draw off about three quarters of what ye drew before. This is an Excellent Spirit. 'Tis given to an Ounce, mix'd with Mint or Fennel Water. If ye please ye may add seven or eight drops of the Spirit of Nitre, according as the Indications require.

We may make another weaker Spirit by adding twenty Ounces of the Rectified Spirit of Wine to what remains of the first Distillation; digesting 'em two days and then distilling, and receiving the Spirit apart. It is weaker than the first Spirit. However it dispels Wind very effectually. We mix it with a little Sugar to Rose Water or Fennel Water.

Sylvius his Carminative Plaister.

Take of the Gums Galbanum, Ammoniac and Bdellium, of each half an Ounce; Frankincense, Myrrh, of each two drams; Opium a dram: Dissolve all in Vinegar of Squils; thicken it a little and add yellow Wax and Pinetree-Rosin, of each three drams; Balsam of Peru and Oyl of Bricks, of each a dram; Oyl of Earth half a dram; Distill'd Oyl of Caraway, half a scruple. With a sufficient quantity of Venice Turpentine make a Plaister according to Art, to be spread on soft
F f leather

leather. The Volatil Particles contain'd in the Gums are very serviceable in dispersing the Viscous matter that imprisons the wind: But the chief Vertue of Plaisters lies in keeping in the Volatil parts, and so procuring the dissolution of the Gluy matter that feeds the Wind. The Opium is serviceable to both these ends, and besides it mitigates the pain, and cheers the Patient.

Glysters for Wind Colics.

Take a pint of Spanish Wine and dissolve it in one Ounce of Benedictum Laxativum.

Another Glyster for Slimy and Wind Colics.

Take a pint of Urine made by a man that is healthy and wont to drink Wine, and dissolve it in an Ounce of Diaphanicum.

A Wine for Wind Colics.

Take Wine; Boyl in it the seed of Caraway, Carrots, Cummin, Anise, Fennel, or Dill: or else beat the seeds a little and mix 'em with new Wine that has not yet fermented; and let 'em stand till the Wine work. It makes an Admirable Remedy in all Colics proceeding from Wind; and is serviceable in the Gravel which is generally accompanied by Wind.

C H A P. X.

Of Pectoral or Bechical Medicines.

*Bechical
Medicines.*

PECTORAL Medicines are those made use of in the Diseases of the Breast, which prepare the matter in the Lungs and Windpipe to be ejected

jected. They are exhibited in the form of Pti-
sanes, Eclegma's, &c. In Asthma's, Coughs, and
the like disorders of those parts. Now the hu-
mours preternaturally lodg'd in the Lungs may
be consider'd in two Conditions.

In one State they are extremely dissolv'd, sharp,
and salin. This their condition is discover'd. 1.
By the thinness of the Spittings, and the sharp-
ness or saltiness of their taste. 2. By the quic-
ken'd motion of the pulse. 3. By the Constitu-
tion of the Person, which is generally lively and
brisk. 4. By a sense of roughness in the Passage
of the Breast.

*The first
State.*

Commonly this sharp disposition of the Blood
is accompanied by Catarrhs, particularly Night-
coughs, slow Fevers increasing towards the Even-
ing, and several other Symptoms which retain to
Catarrhs. Sometimes we meet with Convulsive
Coughs that are very like to Catarrhs. And
when the Lymph is neither very thin nor saltish,
then we conclude the Catarrh is tinctur'd with a
Convulsive quality, and the Spirits are more faulty
than the humours.

The other Condition opposite to this lyes in the
Viscosity, Coarseness and thickness of the humour,
occasion'd by a redundancy of impure Earthy
Sulphur. The Symptoms of this State are, 1. The
Insipid quality of the Spitting. 2. The meekness
of the Pulse. 3. The Pituitous Constitution of
the Person and a Rattling in the Throat.

*The Se-
cond.*

Persons under this disorder are in danger of
being choak'd; they breath with difficulty; and in
a word are seiz'd with an Asthma. But besides
this Pectoral sort of Asthma's there are others that
take rise from a foul Stomach; in which Case vo-
mits and fortifying Stomachics are more service-
able than any other Medicines. There are also
Convulsive Asthma's without any noxious matter
lodg'd in the Lungs, which are treated with Anti-
Epileptics.

F f x.

When

The Indications of the former

When the humors in the Lungs and Bronchia are too thin and subtil, the aird misses its hold of 'em, and so do's not carry 'em off: For a certain measure of Consistence is required to receive the impulse of the Air. Therefore when they are too fine they remain in the Passages, but are not Gluy enough to defend them from the Corrosive Particles of the Air, so that the whole Passage of the Windpipe is gall'd and fretted. Besides, the salts of these humors conspire with the Corrosive parts of the Air to prick and twitch the membrans. Thus we see in such Cases there's a necessity of exhibiting thickening and mucilaginous Medicines, which fix the Salts, carry off some, and qualify the others to defend their quarter from the rough attacks of the Air.

The Opposite Indications.

If on the Contrary the Lungs and Bronchia are stuff'd with Gluy matter, that sticks to the walls of the Windpipe, and will not yield to the impulse of the Air: When the Phlegm blocks up the Passage, and cuts off the wonted succours of Air that us'd to repair to the Lungs and Windpipe, And so causes a difficulty of breathing, and a Ratling or Wheeling in the Throat, In this case attenuating cutting Remedies are proper: I mean such as by Vertue of their Volatil parts are able to put the Phlegm in motion, without occasioning great disorders in the Blood. For if the Blood move nimbly in the Lungs while the Windpipe is thus crouded, it might break some Vessel or create other disorders.

Thickening Medicines.

The Pectoral Medicines that thicken the humors in the Lungs, are most of 'em mucilaginous. Their Vertue lyes in their joyning in with the Air in the Lungs and going along with it; and likewise in softening the sharp Particles which melt down the Blood. In this Rank we reckon up, Liquorice, Sugar, Mallow-roots, the Mucilage of Quinces, Fleawort seed, Gum Tragacanth, Starch, Figs, Raisins, Jujubes, Colts-foot, white Poppies, and Laudanum.

To

To all these Remedies we may joyn several oylly Ingredients. Some cry up Olives joyn'd to a few drops of distill'd Oyls: Others are much for Milk, providing other Circumstances do not forbid it. The Juice, Water, and Broth of Crabs are mightily esteem'd. When we want an incrasating Medicine we take fresh Butter, mix it with Crabs Pulveris'd; then we express the juice and evaporat its moisture. Thus we have an admirable Vuluerary in Phthisics, and such other cases. Sometimes we mitigat disorders in the Breast by exhibiting Linseed Oyl, sweet Almonds, Absorbents, the Syrup of dry'd Roses, &c. If Blood be voided, we make use of the juice of Purslain, Water of Frog's spawn, &c.

All these Medicines are indu'd with parts fit to joyn the Air in the Windpipe, to thicken the thin, and soften the keen sharp humors, to pacify the Blood, and cramp the sharp Salts. Some Physicians say that the Acid of Sulphur exhibited in Water will have the same effect. 'Tis true indeed that Medicine may thicken the humors and temper their sharpness. But at the same time it calls up and provokes the Cough, as much as other Acids. For my part I always prefer such Incrasating Medicines as are free of Acidity. I grant that the Acid of Brimstone does not curdle the Blood so much as others; but 'tis apt to irritate the Membrane of the Lungs, upon which account it deserves to undergo the same fate with other Acids.

If the roughness of the Windpipe is to be peculiarly accounted for, we must prescribe *Eclezma's* or Licking Medicines to be swallowed gradually. But if that Sympton admit of being over-look'd, then we may strike directly at the Cause by exhibiting Ptisanes of Marshmallows, Comfrey, Lungwort, and Liquorice; or Emulsions of the Cold Seeds, Sweet Almonds, and Syrup of Marshmallows.

*The Use of
Milk.*

But of all Incrassating Medicines, Milk is absolutely the best, providing the first passages are clear. As it passes thro, it softens and thickens; when it joyns in with the Blood it tempers and fetters the sharp Salts, by means of its Oily Butter parts. In fine, it lays the sharp humors asleep, and in a Phthisic retrieves the Nutrition of the parts. Indeed if the first passages be tainted with Acid humors it Curdles presently, causes soure Belchings, Loosenesses, and a weak Digestion. For this Reason Purgatives must always usher it in. If it continue to Curdle notwithstanding that precaution, then we must put Leaves of Mint into the Collander where 'tis strained, and exhibit Crabs-eyes immediately before.

If all these stratagems miscarry, we may prevent its Curdling by mixing it with a third part Lime-water, or a few drops of the Oyl of Tartar *per deliquium*.

The foulness of the first passages is not the only impediment forbidding the use of the Milk. Sometimes Fevers and Headaches agree as ill with it, as Obstructions and Viscous humors. And therefore in Phthisics and all Disorders of the Breast we must be very cautious when we prescribe it; because in the cases now mention'd it would inflame the disorders of the parts, and augment the Grossness of the humors. 'Tis needless to condescend to the particular differences of Milks. They are all given with the same intention, and their difference is only gradual. I shall content my self with telling you in General, that all Milk must be administred warm: For so it penetrats better into the parts of the Windpipe, and keeps it self longer without Curdling.

*Pectoral
Aperients.*

The Remedies which divide and attenuat the thick Glue humors in the Lungs and Windpipe, are all compounded of Volatil subtil parts, apt to joyn in with the air in the Lungs, to put the Lazy stagnating humors in motion, and to stir up and animate the fleshy Fibres of the Bronchia and Windpipe to shake off the incumbent humour: In short these

these Medicines operat by giving a lively motion, and attenuating the tough matter which should be strained out in the Windpipe. Under this Head we draw up the Syrups of Brandy, Coltsfoot, Maidenhair, red Poppies, Ground Ivy, Speedwell, Scabious; the Roots of Florentin Orris, Elecampane, Eryngo; the leaves of Hedge-mustard, Hyssop, white Horehound, Nettles, Penny-royal, and many others too numerous to be repeated.

To these we may add Squils which possess a sharp attenuating Salt, as well as other Onions. Tabacco is much commended on this occasion. *Quercetanus* made a Syrup of it, and *Ferdinant* a Decoction, which he says was very successful in Empyema's. *Etmullerus* also cries it much up. But he lessens its active force, by mixing it with Oyl of Tartar and drawing from it an Extract or Essence.

Benzoin and Brimstone are two Pectoral Remedies that can never be too much applauded. To all the abovemention'd Medicines we may add the distill'd Oyls of Anis and Fennel; the Oily Volatil Salts, and especially those of Man's Blood. But they must be used with Discretion, and in moderate doses. *Ludovic* is extream fond of a Powder which he makes up of equal quantities of Cuckow-pint Roots, Brimstone and Florentin Orris: To which, when he suspects Convulsions, he adds Cinnamon of Antimony and Laudanum.

Maiden hair, Red Poppies, and above all Ground-ivy, are possess'd of a sharp Salt, which opens and unlocks the Viscous humors, without disordering the Blood. But Ground Ivy must be always us'd by way of Purgative, otherways 'twill provoke the Blood to irregular motions.

In some Cases the Agitation of the Blood do's no harm, nay it seems in some measure necessary: And then we may make use of Brandy, Hyssop, Hedge-mustard, the Extract of Ground-Ivy, and any other ingredients abounding in Sulphureous Volatil Salts, such as China, Guaiacum, &c. Oftentimes we joyn Bechical Medicines to Diaphoretics,

retics, by which Contrivance they prove more effectual, especially in Pleurifics where the matter is so tough that it cannot be cast up.

There are some cases, in which neither gross In-crassaters, nor active Attenuaters are proper; particularly some Catarrhs; where the sharpness and activity of the humor on one hand argues its thinness and dissolution, and on the other the Grossness of the Spittings argues for the Coagulation of the Lymph. And oftentimes we find there's something Convulsive in the Case. However upon such Occasions the Volatil Ingredients must always be mix'd with Laudanum: Or the safer way will be to mitigate the Symptoms gradually by soft temperat Remedies, such as Amber, Myrrh, Frankincense, Cinnabar of Antimony, Crabs Eyes, prepar'd Pearl, Diaphoretic Antimony, *Poterius's* Antihectic, &c.

If we come to sudorifics we must pick out the gentler sort, such as the Decoction of China, Sassafras, &c.

Many of the Pectoral Roll are accounted for elsewhere. Those which remain to be survey'd in this place, are Colts-foot, Maiden-hair, Penny-Royal, the Dead nettle, Hedge Mustard, Florentin orris, and Benjamin.

Colts-foot.

Colts-foot contains Volatil Salts imbaras'd by a great deal of Flegm, Oyl and Earth, and some acids. It is qualify'd to soften the sharp salts in the Lungs; and is particularly serviceable in Catarrhs, Phthisics, &c. We may make Pectoral Pissanes, Syrups and Conserves of the Leaves and Flowers. Mr. *Boyl* mixes the Powder of the Leaves with the Flowrs of Sulphur and Amber Pulveris'd. This he recommends in a Phthisick. In a Vomit or Ulcer of the Lungs the smoak of the Leaves receiv'd at the mouth is very useful. Et *mullerus* mixes the Leaves with Amber and Anni-seed, and orders 'em to be smoak'd as Tobacco for Catarrhs.

There

There are several sorts of Maidenhair, viz. the White, Black, Golden and true Maiden-hair. All of 'em contain Urinous Spirits fix'd by Acids and cover'd by a great deal of Oyl mingl'd with a little Earth, and a fix'd Salt: So that in the Diseases of the Breast they come near to Colts-foot. However they are more Aperient and Attenuating, but less softening. We may make of 'em Ptisanes, Decoctions or Syrups. The white sort is particularly recommended against the Scurvy. Boyle calls it Paronychia after *Matthioli*, and cries it up in an Epilepsy.

Maiden-hair.

Penny-Royal affords some Acids, urinous Spirits, a Volatil Salt, an Oyl and a fix'd Salt. 'Tis aperient, good against Colds; In Decoctions it procures Sweat and dispels Wind. A spoonful of its juice, according to Mr. Boyle, mix'd with a little Sugar is an admirable Remedy against the Chin-cough of Children.

Penny-royal.

Lamium has almost the same Vertue as Penny-royal: Only 'tis not quite so aperitive.

The Dead Nettle.

Hedge-mustard is more aperient. *Lobel* makes a Syrup from it, which is much admir'd in Asthma's, Coughs, and other disorders of the Lungs occasion'd by a tough Lymph. The Seed may be used in the same Cases. A Dram of it given in white Wine is a good Diuretic in a Suppression of Urin.

Hedge-mustard.

Benjamin is a very subtil and Balsamic Yellow Rosin. It qualifies the Corrosive sharp humours that molest the Lungs: And by that means proves very serviceable in Phthysics, Coughs, Asthma's and Catarrhs. Its dose must be moderate, not exceeding ten Grains at a time, because 'tis very active. We add it to Fumigation powders for Catarrhs or disorders of the Lungs. There are several preparations taken from it.

Benzoin.

If ye dissolve it in Spirit of Wine, and poure in Water, 'twill give a Precipitat, which we wash and dry, and term the *Magistery*.

If

A List of Pectoral Medicines.

If ye sublime it upon a gentle fire; Cornets of Paper being plac'd over the Vessel; ye have its Flowers. But Benjamin it self is e'en as good, if it be well purified.

We may prescribe Benjamin it self without any further preparation, to be taken at Night in an Egg: If ye dissolve it, the Oyl of sweet Almonds is the best Vehicle, by reason of its smoothing quality.

*Floren-
tin Orris.*

Florentin Orris contains a few Volatil Salts, much Oyl, and some Acids. *Ludovic* believes, four or five Grains of the powder will make Children Vomit. It penetrates and attenuats powerfully; and therefore is made use of in Pectoral powders against Asthma's, Coughs, and all other diseases arising from a Gluy Lymph. 'Tis likewise added to Sneezing Powders.

A List of Pectoral Medicines.

Incrassating Medicines.

Comfrey, Marshmallows, Violets, Coltsfoot, White-Poppies; in Ptisanes or Decoctions.

Gum-Tragacanth, The mucilage of Quinces, Fleawort, &c. Sugar; in Lochs.

Liquorice, Hony, Figs, Dates, Raisins, Fijubes; in Ptisanes or Eclegma's.

Sperma Ceti, to two scruples in Broth.

Sugar of Lead to eight grains.

Poterius's Antihectic, to a dram.

Diaphoretic Mineral, to a dram.

Crabs in Broth.

Laudanum, to a grain.

White Soap, to half a dram.

Attenuating Medicines.

Sagapenum; from half a dram to one.

Gum Ammoniac, in Electuaries or Pills; from a scruple to a dram.

The

A List of Pectoral Medicines.

75

The five sorts of Maidenhair, Coltsfoot, red Poppies, ground Ivy; In Decoctions to a handful.

The Roots of Florentin Orris, to a scruple.

of Cuckowpint, to a Scruple in Powder.

of Elecampane, of Eryngo; in Ptisanes to an ounce.

Leaves of Hedg-mustard, Hyssop, Dead-nettle, white Horehound; in Ptisanes by handfuls.

Brimstone from one to two scruples.

Amber, to a dram.

Myrrh, to two scruples.

Frankincense to two scruples.

Benjamin, to ten grains.

Chymical Medicines.

Brandy, from one to two Spoonfuls; Milk of Sulphur, from six to sixteen grains, in a convenient Vehicle.

Flowers of Sulphur; from ten to thirty grains, in Lozenges.

Flowers of Benjamin from one to six grains.

Oyl of Filbeards; from two drams to an ounce.

Sulphur of the Cinnabar of Antimony; from two to 30 grains.

Laudanum; from one to three grains.

The Forms of Receipts.

Mesue's Pectoral Pill.

Take the Juice of Liquorice and Sugar, of each six drams; Search, Gum Tragacanth, and Sweet Almonds, of each four drams; with the Mucilage of Quinces made with Rosewater, make Pills. They serve to qualify and soften sharp humors. They take off the roughness of the Windpipe, and thicken the humors lodg'd within it, so as to facilitat their coming up in Coughing. Dose from half a dram to one. The Pills of Hounds tongue are likewise serviceable for the same purposes; and they are rather better by reason of the Opium they contain.

A

A Potion for Asthmatical Persons, whose Lungs are stuffed with Gluy humors.

Take half a dram of Sperma Ceti, dissolve it in half an ounce of the Syrup of Hyssop; adding Hyssop Water and Cinnamon Water, of each one ounce.

A Pectoral Ptisane against Coughs and sharp Catarrhs.

Take a handful of Coltsfoot Leaves, half a handful of the five sorts of Maidenhair, two Pugils of the Flowers of Coltsfoot, half an ounce of Corants, ten Fijubes. Boyl all in four Quarts of Water till one be wasted.

A Ptisane for Pleuritical Persons.

Take a handful of the Leaves of Wild Poppies, half a handful of the Leaves of Hyssop: Boyl 'em half an hour in three Quarts of Water. When ye Remove it from the Fire, add a stick of Liquorice; or if the Fermentation of the Blood be moderat, an Ounce of White Hony instead of the Liquorice. These Ptisanes must be often made fresh, else they grow sowre.

A Ptisane for Phthical Persons.

Take an Ounce of Sassafras, cut it into small peeces, and pour in three Quarts of Boyling Water. Let 'em boyl a little, and then add half a handful of Gound Ivy, and as much Lungwort. After they have boyled a little oncc more; take 'em from the fire, and add a little Liquorice.

A Soap for Phthical Persons.

Take an Ounce of the Oyl of Turpentin, half an ounce of the Oyl of Tartar; Let 'em digest till they come to a Soap, to be exhibited by it self, or dissolv'd in the distill'd Water of Crabs. Dose half a dram at a time.

Another

Another.

Digest the Oyl of Human Blood with Salt of Tartar, 'twill become a Soap far beyond the former.

A Powder for Asthmatical Persons molested with Gluy humors.

Take two drams of the Roots of Cuckowpint, gather'd before the Plant brings forth its leaves; cut it into small pieces, and steep it twentyfour hours in white Wine; then dry it in an Oven and Pulverise it. Add to it a dram of Poterius's Antibettic, a dram of Crabs Eyes, and two drams of Sugar; mix all together. Dose half a dram in some Liquor.

A Syrup for thickening the matter of Coughs.

Take Marshmallow Roots two Ounces, Comfrey leaves a handful, fifteen Fijubes, ten Dates without Kernels; boyl them in three Pints of Water: strain out the Liquor and add two pound of Sugar: Then boyl all up to the Consistence of a Syrup. Exhibit a little spoonful in the Extremity of the Cough, or mix it with Water for common Drink.

An Attenuating Syrup.

Kindle Brandy upon Sugar, and make a Syrup.

C H A P. XI.

Of Alteratives properly so call'd.

ONE would think it an easier task to evacuate the noxious part of the Blood and humours, than to correct it. But it happens sometimes, that

The Necessity of Alteratives.

the whole Mass of the Blood and Humors is equally overrun and tinctur'd with foreign Ferments. In so much that the Evacuation of all the impurities in the Body, would infallibly kill the Person. In such cases we are oblig'd to make use of such Medicines as change and alter the indisposition of the Blood and Humors.

Sometimes when the Mass of Blood is only corrupted in part, we must nevertheless insist upon Alteratives to favour the Patient's strength. Because Evacuating Medicines do equally attack both the Good and Bad humors. Besides, after the bad humors are corrected, Alteratives are still useful to promote the nourishment of the parts and cheer the Spirits.

The preternatural indisposition of humours.

The ranks of Alteratives.

In general we may cast the indispositions of the humors into these Heads. They are either over fluid, over-rarified, and take up too much room in the Vessels; or else they're too thick, and lazy.

The Medicines which account for the former disorder are rang'd under the Head of Incrassaters; And those for the Second belong to the Chapter of Attenuating Medicines.

To carry the Division further. The Influence of strange ferments upon the Mass of Blood is either such, that it ferments continually, or that it ferments by intervals; or else that it becomes sower and sharp without any sensible fermentation. With Reference to these disorders we shall examin the *Febrifuga's*; the Anti-Venereal, Anti-Scorbutical, and Anti-Hypochondriacal Medicines.

Specifics for peculiar parts.

Sometimes the foreign ferments in the Mass of Blood place 'emselfes in the solid parts of the Body. For which Reason we shall also inquire after such Specifics as are apt to defeat the ferments in the solid parts, without any general Influence upon the whole mass of Blood. Upon this score we may reckon up Cephalics, Ophthalmics, Cordials, Medicines for the Lungs, Stomach, Liver, Spleen, Kidneys, and those of an Anti-Hysterical Character.

After

After the Specifics for the solid parts are accounted for, I shall pass on to Specifics for particular Diseases, namely those against Apoplexies, Epilepsies, Palsies, Pleurisies, Dropsies, Dysenteries, the Colic, Stone, Gout and Worms.

*Specifics
for parti-
cular Dis-
eases.*

In the last place, Considering that the Disposition of our humours puts a great byass upon Love-matters, and has a great hand in forwarding or thwarting a Nurses Milk; I shall therefore allot a Chapter for Medicines answerable to such Cases.

I grant all these Remedies cannot be call'd Alteratives, because some of 'em cause Considerable Evacuations. But at the same time their Specific Vertues lie in the Alteration of the humors which are not evacuated. For if their Evacuating force could by it self compass the Cure of these Diseases, then all Evacuating Medicines of the same Class would be equally proper. Now for proof of the contrary we see *Ipecacuana* which purges both ways is a Cure for Dysenteries, far more effectual than the other Emetics and Purgatives. The Emetic and Sudorific preparations of Antimony are more serviceable in Malignant Fevers, than any other Emetics and Sudorifics. The Purgative and Sudorific preparations of *Mercury* have a peculiar title to Venereal distempers, beyond other Medicines of the same evacuating force. Upon these accounts 'tis aparent, such Remedies not only evacuat humors, but alter those they leave behind, and that in a peculiar and Specific way.

C H A P. XII.

Of Attenuating and Aperient Medicines.

ATenuating Medicines put the Blood and Humors in motion, and preserve their Liquid State; partly by rarifying, partly by agitating their

*The effect
of Aperi-
tives.*

their particles without fermentaton, or by imbibing the acids that congeal 'em.

In general all Attenuating and Aperitive Medicines remove Obstructions, and melt down the thicken'd humours that occasion'd 'em.

Oftentimes these Remedies prove Diaphoretic. Sometimes they pass by Urine; and sometimes they serve to expel the terms.

We are wont to add 'em to Purgatives to prevent gripings. Sometimes when we have to do with Persons whose Blood is gross and thick, we exhibit 'em before the Purge, because they divide and cut the humours, and make them more pliable.

Their Division.

These Remedies are drawn up in several Ranks. Some are only aperient by accident; that is, they drink in the Acids in the first passages; and by that means promote the Liquidity of the Bile, Pancreatic juice, Chyle and Blood, without any sensible fermentation or rarefaction. Such are made use of in suppressions of the terms, Disorders of the Stomac and Loosenesses, arising from a sharp ferment in the Stomac or Guts. However 'tis to be fear'd, their Earthy parts being congeal'd by the Acids in the first Passages may add to the Obstruction: and therefore they ought to be interlac'd with Vomits and Purges, and sometimes mix'd with Lixivious Salts. In this Rank we reckon up Crabs eyes, Coral, Amber, Cuttlebones, Bole-Ammoniac, seal'd Earth, Shavings of Ivory, Harts-horn, the bone of a Stag's Heart, the Powder of Pikes Jaw-bones, which only drink in the acids in the first passages, and by rendring the Chyle Liquid have the same effect at second hand upon the Blood.

Attenuating Medicines Operating upon the Blood.

There are other Attenuating Medicines, whose parts are not so gross, but more apt to melt and penetrat into the Mass of Blood. Others again have metallic Particles which make a more vigorous resistance against the acids in the first passages, and are not so easily fix'd. Now all Remedies that penetrat into the Blood without causing great

great fermentation, or loosing their Aperient virtue; these, I say, are very serviceable in all Obstructions of the Bowels, schirrous tumors of Liver or Spleen, Dropsies, Hypochondriacal Melancholy, Fevers, and in general in all Diseases, where the Liquidity of the Blood is destroy'd by foreign ferments. For in such Cases the Violent Motion and Fermentation of the Blood are very troublesome. See the Chapter of Diaphoretics. Among this sort of Medicines we may cast in Lixivious Salts, as Salt of Wormwood, Tamarisk and especially Salt of Tartar, together with such Remedies as are both Lixivious and Oily, as *Sperma-Ceti*. These Salts dissolve easily and are more penetrating than Earthy Medicines. We may add to the Bezoar-mineral, *Poterris* his Antihectic, Diaphoretic Antimony and Cinabar of Antimony; their Metallic Particles being stiff and Compact are not easily penetrated into by the acids of the first Passages. For the same Reason we may add the Crocus of Steel, soluble Chalybeat Tartar; tho' they want that Sulphur which enables the other to encounter with the acid more effectually, yet they are more solid and have a stronger virtue to dissolve the Blood.

To Conclude. There are other Attenuating Medicines richly stock'd with Volatil and Aromatical parts, which put the Blood and Spirits into Violent motions, and raise a strong fermentation of all the humors. These are very serviceable in the Plague, Fevers, Sleepy Distempers, and Obstructions of the Nerves. But we must take care the Mass of Blood be not clotted; and that the Lungs and principal Bowels be free of Obstructions. Because these Medicines put the Blood and Humors into a violent motion, before they dissolve the Clots or unlock the Obstructions, and consequently may either break a Vessel or inflame the Obstructions of the Lungs or Bowels. This sort of Remedies are either simply Volatil, as the Volatil Salts; or Volatil Sulphureous, as Myrrh, Castor, the Tincture of the Salt of Tartar, Venice Treacle, Treacle-
G g Water,

*Aroma-
tical Atte-
nuating
Medicines.*

Water; the Sudorific Decoctions of Guaiacum, Saffras, &c. The Waters of Butterbur, Burdock, Cinnamon, &c. or else they are stor'd with Volatil Oyls, as the Leaves and Flowers of Rosemary and Lavender; Juniper-berries, Stoechas, Penny-Royal, Wild-marjoram, &c.

The famous *Sylvius* joyns the inciding Aperients with acids, especially the Spirit of Nitre, which, he says, has a peculiar vertue of dissolving Stones, Gravel, and Tartarous matter, in the Passages of the Choler and Urine. I am satisfied that these Spirits applied immediatly to a Tartareous Substance will readily dissolve it. But I think they should never be exhibited without the addition of some Volatil Sulphur, which serves to convey 'em to the parts where such matter is lodg'd, and hinders 'em to congeal the other humours they meet with in their way.

'Tis needless to give a particular description of all the Attenuating Medicines. Many of 'em are accounted for under the Head of Diuretics, Sudorifics, and those which bring down the Terms. There are two indeed that have a peculiar title to an Aperitive Vertue, which are accounted Specifics against the Jaundice, and deserve particular notice in this place; I mean, Celandin, and Turmeric.

Celandin.

Celandine abounds in Lixivious and Volatil Salts and Oyl. It contains also some Earth and Phlegm. Its Vertue lyes in opening Obstructions. We give it with Extraordinary success in the Jaundice and Dropsy. We may mix its powder with white Wine or common Water; adding a small quantity of the Tincture of Steel. *Palmarius* recommends it in Malignant Fevers. The distill'd Water has the same Vertues, but somewhat weaker, and therefore is chiefly used in Cataracts of the Eyes. Its Juice may be used for the same purpose, but we must take care its sharpness does not cause inflammations. The Root infused in white Wine is admirable in Cachexies, or the beginning of Dropsies, when the Patient begins to languish and lose his Color. Commonly

we

we infuse an Ounce of the Root in a Pint of Wine. Its Juice may be given from half an Ounce to one and a half at a time.

Turmeric Roots resemble Celandin not only in Color, but in the like principles. However they have less store of Volatil Salts, and their principles are somewhat more compact. A Tincture extracted from 'em with the Volatil Spirit of Sal-Ammoniac is an admirable Remedy in a Jaundice or Greenfickness. Mr Boyle admires the Tincture made with the Spirit of Man's Blood. These Tinctures are given to twenty or thirty drops in a Convenient Vehicle. Some make an Infusion of half an Ounce or an Ounce of the Root in white Wine; but 'tis not so effectual as the other.

Turmeric.

To this account I might add the preparations of Mercury, as being all aperitive: But I reserve them for another place.

A List of Attenuating Medicines.

AMBER in Powder, Crabs Eyes, Bole Armeniac, Cuttle bone, Seal'd Earth, Pikes Jaw bones, Bones of a Stags heart; from half a dram to a dram in some Vehicle.

Shavings of Ivory, Hartshorn; in Pilsanes by handfuls.

Salt of Wormwood, Tamarisk, Sal-Ammoniac, Tartar, from half a dram to one.

Sperma Ceti, Aperitives crocus of Steel, in some Vehicle.

Soluble Chalibeat Tartar, Poterius's Antihæstis, Diaphoretic Antimony, Bezoar Mineral, Jovial Bezoar; see the Diaphoretics.

Cinnabar of Antimony to twenty grains, in some Conserve.

Cinnamon Water to an Ounce and a half.

Turmeric in Decoctions to half an Ounce.

Celandin Roots to an ounce in a Pint of white Wine.

Sweet Mercury to twenty grains.

A List of Attenuating Medicines.

Powder of Toads, Crabs ; Roots of Eryngo, Elecampane, Parsly, Madder, Lime Water ; see the Chapter of Diuretics.

Butterbur Water, to six ounces.

The Cordial Waters of Baum, Mead sweet, Carduus Benedictus, &c.

Extract of Juniper, Venice Treacle, Castor, Myrrh, Saffron, Sassafras, Guaiacum, China, Sarsaparilla, Volatil Salts, Spirits ; see the Diaphoretics.

The Essence and Decoction of Restharm, Penny-royal, Horehound, Mugwort, Borace, Gum Ammoniac, Burdock ; see the Medicines that bring down the Terms.

Leaves of Hedge Mustard, Florentin Orris, Sulphur, Sagapenum ; see the Pectoral Remedies.

The Forms of Receipts. An Aperitive Tincture.

Take an Ounce of Celandin Roots, of Turmeric Roots ; Pulverise 'em, and pour in two Ounces of the Volatil spirit of Sal-Ammoniac drawn with Quick-lime. Add four Ounces of good spirit of Wine, let 'em circulate together for some time, at least 24 hours. Then pour off the Tincture by Inclination ; dose from half a dram to one.

An Aperitive Electuary against the Jaundice.

Take half an ounce of Celandin Roots in Powder, two drams of Eryngo Roots, as much Borace, three drams of Aperitive Extract of Steel, a dram of Saffron ; Incorporat all with the Syrup of the five Aperient Roots. Dose from half a dram to two scruples.

A Ptisane or Decoction.

Take Roots of Madder, Elecampane and Sorrel, of each a handful ; half an ounce of the Filings of Iron, and as much of the Cream of Tartar. Put 'em into a bag, to be hung up in a Vessel with six Quarts of Water boyld into four, upon a very slow fire.

An Aperient Wine.

Take an ounce of the Aperient Crocus of Steel, half an ounce of the powder of Crabs, and of the Roots of Good Henry, twenty Winter Cherries bruised. Pour in three Pints of Wine. Let 'em infuse 24. hours, stirring the Bottle now and then. Then strain out the Liguor. Take a Glas in the Morning fasting against Obstructions and Cachexies.

An Aperitive Syrup.

Take of the Roots of Eringo, Madder, Rest-harrow, of each an ounce; Leaves of Horehound and Penny-royal, of each a handful; Sal-Amoniac, two drams. Boyl 'em in three Quarts of Water till two be wasted. Then strain out the Liguor and add to it an ounce of the Syrup of Steel, and a Pound and a half of Sugar. Boyl all to the Consistance of a Syrup.

C H A P. XIII.

Of Incrassating Medicines.

IN discoursing of Alteratives I shew'd that they operat only upon the Blood. So that when the Blood is thicken'd by Medicines, we cannot account for the effect any other way than by referring it to the immediat mixture of their parts with the Blood. Neither can any Medicines produce that effect unless their parts be grosser than those in our Vessels, or else be apt to gather and unite the parts of the Blood. Which they may do, by controuling the ferments, and so lessening the motion of the Blood and consequently the quantity of its separat humours.

The effect
of thicken-
ing Medi-
cines.

humours. For 'tis well known, that when the particles of the Blood are Compact, the respective humors cannot be strain'd out in such large quantities as otherwile. And accordingly in such cases we see Persons sweat less, and sometimes void less Urine.

Counterindications.

We must take care we do not exhibit Medicines that thicken the Blood of 'emselves, to such as are liable to violent Heats and fermentations for want of due transpiration. Such are Hypochondriacal and melancholy Persons, and they whose Skin is thick and close. Perhaps these Remedies may seem to comfort 'em for some time, but when once the coarse parts are put in motion, and the Subtil matter begins its range, then the abovemention'd symptoms will appear with fresh force. For the parts of the Medicines being massy and large will certainly disturb the Blood and shake the parts. For this Reason, we see, the cooling Ptilanes, Emulsions, Broths, commonly prescrib'd in continual Fevers, do rarely make a Cure on't; that is, they never Cure but when Nature is strong enough to resist both the Remedy and the Disease.

However these Incrassating Medicines may safely be administred when the Mass of Blood is over-dissolv'd thro' an indiscreet use of Volatil and sharp Food; or when the texture of the Skin is thin and open, and Transpiration is rather excessive than defective.

In the account of Incrassating Remedies we may reckon up the Roots of Water-Lillies, Sorrel, Succory, Marshmallous, and their Leaves: The Leaves of Violets, Purslain, the four large Cold Seeds, (namely those of Cucumbers, Gourds, Melons and Citruls,) the four lesser Cold Seeds, (namely those of Scariola, Endive, Lettuce and Purslain) the Salt of Tartar, Sal-prunel, Woodsorrel, Verjuice, Juice of Lemmons, Barberries; the Spirits of Sulphur, Vitriol and Nitre; the mucilages of Fleawort Seeds and Quinces; and in short whatever checks the impetuous motion of the Blood,

Blood, and inveigles its Sulphur whether by tenacious parts, or by acids.

Of these Medicines we oftentimes make *Ptisanes*. But we must observe that those which are strongest and most Laden with the parts of the Ingredient, are not always the best. To my fancy simple Water is better for diluting the salts of the Blood, and answering all the Other Indications, providing it be season'd with Acid Spirits or Nitrous Salts.

We are wont to make up *Juleps* with the Syrups of the above mention'd Plants; But Experience do's not recommend 'em. The large quantities of Sugar they contain, are apt to give a Sulphur and sharp Salt which are quite opposite to the Indications.

Emulsions are commonly made from Oily Seeds. Now this Oyl is quickly exalted, and tho it seem to cool at first, yet soon after it creates a notable head.

Emulsions
Incrassating Remedies charg'd with tenacious parts are only serviceable when the Blood is overrun with sharp Particles, as in Phthisics, and Hectic Fevers. They smooth and soften all the sharp Salts they meet with. Among many others Comfrey, Milk, Tortoises are much approv'd on such occasions. Acids are not so proper to repair the Oily parts of the Blood that are suppos'd to be run down by the sharp Salts. Besides, they are always suspected in the Diseases of the Breast, because they awaken the Cough as they pass, and gall the membrains of the Lungs.

The Broth of Crabs, Frogs, and Veal are not amiss. The same may be said of such Plants as are stock'd with dry Volatil Salts, somewhat Oily, but diluted with a great deal of Phlegm. Such are Endive, Succory, Purslain, Lettuce, &c. They imbibe the Volatil Acids that fret the Blood; and so defeat one great Cause of the Dissolution of the Blood: And forasmuch as their Oyl is not apt to exalt it self they are in no danger of

heightening the motion of the Blood. To this account we may add the Water of Frog's Spawn, Water of Crabs, &c.

When a Volatil Acid is the Cause of the Dissolution of the Blood we make use of the Alkali's, that on other occasions are said to dissolve the Blood, *viz.* Crabs Eyes mix'd with Sugar of Lead, Coral, &c.

A Tincture made with Spirit of Wine from Vitriol of Steel and Sugar of Lead may be exhibited in Phthisics, Spittings of Blood, and all other Diseases accompanied by a Colliquation or Dissolution of the Blood.

Narcotics make no mean Figure in the Incrassating Roll. Such are Opium, white Poppies, Henbane Seed. Neither are any Viscous Medicines improper, providing they are well season'd with Volatil Oyls; such are Gum Tragacanth, Frankincense, and all Mucilages. To which we may add such as contain Volatil Salts and Oyls, providing they are temperat, as the Gelly of Hartshorn, the Doccoction of Ivory, Amber in Powder, &c.

Most of the now mention'd Ingredients are examin'd elsewhere, so that there only remains to be new accounted for, Quinces, Gum Tragacanth, and Lead.

Quinces. Quinces contain an Acid, an Oyl, Urinous Spirits, and a great deal of Earth which entitles it to an Astringent and Styptic Vertue. They are of Excellent use both inwardly and outwardly, in all Diseases of the Stomac. Their Juice, Syrup, or Gelly may be mix'd with Mint or Cinnamon Waters in Vomitings, Lienteriar's, &c. Sometimes we make a pulp of 'em, or paste to be dissolv'd or sprinkled with Cordials and applied to the Stomach by way of Cataplasme or Fomentation in the same Diseases. The Seed of this Fruit is very mucilaginous. It affords a great deal of Oyl, Phlegm, and some Volatil Spirits. The mucilage made from it softens and thickens the

the humors. For External use; we mix it with the Water of Frogs Spawn, Nightshade, Sugar of Lead and Camphir, for Burnings, Erysipelas's, Cankers, and painful tumors. We apply it to the Piles, mix'd with the Decoction of Toadflax; to the Eyes with Ophthalmic Waters; to the Tongue for taking off and softening the Crust that belets it in hot Fevers; in that case we mix it with Sal-Ammoniac and the Juice of Houfeleek.

Gum Tragacanth dissolves in warm Water, and gives a Mucilage which in time becomes sour. However 'tis a Genuin Alkali, good against all Diseases of the Breast, sharp Defluxions, Coughs; we add it to Lozenges, Lochs, &c. 'Tis likewise of good use against a heat of Urine or Ulcers in the Urinary Passages; being qualify'd for such offices by virtue of its Balsamic and smooth Particles: its dose comes to a dram. We may use it in Glysters for a Dysentery, and Collyriums for the Eyes.

Tragacanth.

Lead is a soft Mettal, easily melted, it seems to contain a great deal of Mercury, and perhaps 'tis by virtue of the Mercury that it destroys all other Metals except Gold and Silver.

Lead.

Lead Calcin'd with a Reverberatory fire becomes red and heavier, and then is term'd *minium*.

Minium.

Lead Calcined with the Vapors of Vinegar gives a white rust which we call *Ceruss*.

Ceruss.

Lead burn'd with Brimstone becomes Black, and passes under the name of Burnt Lead.

Burnt Lead.

Lead mix'd with the dross of other Metals in a Silversmiths purifying Pot, turns to a Froth, which we call *Litharge* either of Gold or Silver according as 'tis more or less Calcin'd.

Litharge.

If ye dissolve *minium* in Distill'd Vinegar, and evaporate the Solution till it contract a Skin, and set the Vessel in some cold place, it turns into white sweet Crytals, called Salt of Lead. If ye desire it whiter, dissolve it in equal quantitts of Water and Vinegar, then filtrate and evaporat again.

Salt or Sugar of Lead.

The

The Salt and Solution of Lead gives the Water a white Color, which christens it Virgins Milk: There are some distill'd Waters in which it will not dissolve by reason that they are void of Seasalt. Sugar of Lead is given Inwardly to to fifteen Grain. It has an admirable vertue in Quenching the fire of Love, healing Internal Ulcers, taking off the heat of Urin, and Hypochondriacal Melancholy. If we mix it with Crabs Eyes 'tis good against Quartan Fevers.

*Anti-
Phthifical
Tincture.*

Take equal quantities of the Sugar of Lead and Vitriol of Steel or Copper: Digest 'em with Spirit of Wine, and Extract a Tincture to be given to one or two Drams in Phthificks and Ulcers of the Lungs, or other parts. 'Tis very astringent.

*Artifici-
al Blood-
Stone*

Distil Vitriol of Steel with Sugar of Lead in a Retort: Upon the Neck of the Retort ye have an Artificial Bloodstone.

*Butter of
Lead.*

The Oar of Hungarian Lead, Distill'd with the Corrosive Sublimat, gives a Corrosive Butter which we use as a Caustic. If ye pour Common Water upon it, it precipitates a Powder which purges gently to ten grains.

*Bezoar
of Lead.*

If ye pour Spirit of Nitre upon the Butter of Lead it gives a Bezoar like to Bezoar Mineral, but more serviceable in the Scurvy and Hypochondriacal Melancholy.

I took notice above of the Balsam of Lead made by digesting Oyl of Turpentin or Juniper with Salt of Lead; which is used both Inwardly and Outwardly for Ulcers. But I doubt the Tincture of the Lead in this preparation is very weak.

*Another
Butter of
Lead.*

Some make another Butter of Lead by taking Vinegar impregnated with *minium*, and mixing it with the Oyl of Roses or that of Linseed. 'Tis made use of in Tetters, Inflammations and Burnings. If ye mix Lime Water with Linseed Oyl and Sugar of Lead; 'twill make a better Remedy against Burnings.

'Tis

'Tis needless to take notice of the External uses of Lead, in Ointments, Plaisters, Liniments, &c. I shall have occasion to meet with 'em else where.

A List of Incrassating Medicines.

Roots of Sorrel, Water Lillies, Succory, Marshmallows ; from one to three ounces, to two Quarts of Pilsane.

Leaves of Water Lillies, Plantane, Sorrel, Wood-sorrel, Purslain, Lettuce, Wild and Garden Succory ; from one to two Handfuls.

Seeds of Purslain, Scariola, Endive, Lettuce ; from one to three drams.

Seeds of Citrons, Melons, Gourds, Cucumbers ; from a dram to half an ounce in Emulsions.

Poppy beads, three of 'em in Decoctions.

The mucilage of Floawort, Quinces, &c. in Pills or Eclegmas.

Gum Tragacanth and Gum Arabic ; from a Scruple to a dram.

Juice of Limons ; from half an ounce to one.

Barberries and Verjuice ; from half an ounce to one.

Crabs eyes, Coral in Powder, to a dram.

Chymical Preparations.

Salt of Nitre.

Sal-Prunel and Crystals of Tartar ; from half a dram to one and a half in a quart of Liquor.

Spirit of Nitre, the Acid of Sulphur.

Spirits of Vitriol, Salt, Nitre, all Dulcified ; Allum, Sugar, Hony ; to a grateful Acidity.

Sugar of Lead, to twelve grains.

Distill'd Waters of Frogs Spawn, Crabs, Plantane, Purslain, to six ounces.

The

The Forms of Receipts.

For A Cough.

Take the Juice of Liquorice and Gum Tragacanth, of each a dram, Dissolve 'em apart in half a Glas of the Decoction of Marshmallows. With Sugar make a Syrup, or rather a Loch, to be lick'd of now and then with a Stick of Liquorice.

For the Heat of Urin.

Take two drams of Gum-Arabic ; Dissolve 'em in four ounces of fair Water, add an ounce of the Syrup of Marshmallows, half an Ounce of the Syrup of Water-Lillies mixt. Drink one half of this mixture in the Morning fasting, and the other as ye go to Bed.

A Julep to mitigat the Heat of Continual Fevers.

Take four ounces of Water ; Dissolve in it half a dram of Sal-Prunel, an ounce of the Syrup of Violets, and twenty drops of the Acid of Sulphur.

Another to stop Bleedings.

Take a Glas of the Decoction of Sorrel and Roots of Water Lillies, half an ounce of the Syrup of Water Lillies, and twenty drops of the Dulcified Spirit of Nitre.

C H A P. XIV.

Of Narcotics.

Narcotics are Medicines procuring Sleep. Some of 'em attenuat, others incrassat. Some put the Blood in motion, rarify the humors, and withal procure Sleep: Others likewise dispose to Sleep; but are so far from raising new motions or fermentations, that they compose and unite the humors. Of the former sort are Saffron, and Spirit of Wine. 'Tis true this Last mention'd congeals the white part of the Blood; but at the same time it causes a violent agitation and heat. Now both these Medicines, being Volatil and apt to put the Blood in motion, are known to procure Sleep. Of the latter sort are the four Cold Seeds whose oily substance does at once thicken and compose the Blood, and cause Sleep.

The difference of Narcotics.

However, 'tis neither the attenuating, nor the thickening quality that procures Sleep: If it were so, all Attenuating, and all Incrassating Medicines would be Narcotic; whereas we see, Volatil Salts and Acids, are of a Contrary Stamp.

This gives occasion to Conjecture that Narcotics have a greater Influence upon the Spirits, than the Blood. And accordingly we find the most powerful Narcotics are richly stock'd with Volatil Oyls mix'd with Earthy parts, and Volatil Salts mix'd with Acids. Opium, Mandrake, Hounds tongue, and Tobacco are Instances.

Their influence upon the Spirits.

In short, all vigorous Narcotics are compounded of Volatil Salts, slight Acids, Oyl and some Earthy parts. When they enter the Blood, they presently fall

The effect of Narcotics.

fall

fall in with the Spirits, and tye 'em up from action. Whereupon the Body becomes languid; all the parts being rob'd of their wonted supplies of Spirits, are in a manner mortified; and give the Soul to understand their disorder by means of the Nerves: Thus the Spirit is drown'd, and render'd insensible of pain.

The Symptoms requiring Narcotics.

This account of Narcotics will naturally conclude their usefulness to controul the over-rapid motions of the Spirits, especially in Love Madness, Malignant Fevers, Asthma's, Convulsions, immoderate Evacuations, &c.

In case of Violent pain they are very serviceable, because they recruit and keep up the Patients strength. 'Tis the Physicians part, not only to Cure, but to give ease; to mitigate the pain and other Symptoms, while he effects the Cure. Besides pain may give rise to vehement Passions in the mind: It may raise a Fever, and disorder all the Nervous parts: Tho we cannot enter into its nature as much as we could wish, yet thus far we know that what ever galls the Spirit does mightily disorder the Body. For which Reason pain ought to be particularly accounted for.

When the Spirits move rapidly! Narcotics are proper.

When the Blood and humors move impetuously; when the Disease begins to affect the Head; when the Person grows furious, and the whole machine of the Body is disorder'd by Irregular motions; In these cases 'twill be proper to administer Pacific Medicines. Hippocrates says, Sect. 2. aph. 3. *Ubi delirium somnus sedaverit bonum.* For Narcotics cramp the Spirits, retard the motion of the Blood, redress the disorders of the Humors, and fortify the Brain against fresh attacks. If they be mix'd with Cephalics, they'll prove more effectual.

There are some modern Physicians who forbid Narcotics in the height of Acute Distempers. But I cannot subscribe to their opinion. They plead that these Medicines lessen the motion of the Blood and Spirits, and so retard the business of Copcoction. Therefore, say they, we ought not to administer

Nar-

Narcotics but in the very begining of Fevers, as if then they were of admirable use. Now 'twere easy to shew that Opium, and other Narcotics do not lessen the motion or fermentation of the Blood. Besides, I would fain know why Opium should be rather admitted in the beginning and during the increase of Fevers. To be sure at that time the principles of the Blood are not yet at liberty, and consequently the fermentation is but weak : And since they'll have Opium to hinder Concoction, doubtless 'twill do that more effectually when the fermentation languishes, than when the principles of the Blood are loose, and the motion inflam'd.

If drowsy and Lethargic Symptoms attend the height of Acute Fevers, as it sometimes falls out, then indeed I grant Narcotics ought to be avoided. But on the other hand, If the Spirits be up in disorderly motions ; if dotage, Convulsions and watchfulness seize the Person ; then, questionless the Symptoms ought to be pacified by Narcotics mingled with Cephalics.

Thus I conclude, such authors as put off the administering of Opium, till the Declension of Acute Fevers, or the twelfth or fourteenth day of Phrenesies, or in fine till they have purg'd the Patient : These Authers, I say, are strangers to Regular practice. We may compare 'em to Souldiers that will not take up their Arms, till the Enemy be possessed of the Victory. I have sufficiently exposed their folly in my Treatise of *Acute Distempers*, and therefore shall take leave of 'em in this place.

Often times the voiding of Blood, Choler and other humors, is the result of fermentations occasion'd by the Irregular motion of the Spirits. Such disorders cannot be better accounted for than by exhibiting some Narcotics : Because they cramp, and imprison the Spirits, and so put an end to the Symptoms they occasion'd. Accordingly we find Opiats will check Bleedings, put a stop to Bilious Vomiting, and moderat Loosenesses.

They

They are likewise serviceable after over-Purgations or any malign Evacuation; as being apt to hinder the further dissipation of that Spirits, mewing them up in the Brain, and putting all the parts in repose. Thus we frequently back Purges and Vomits by weak and temperat Narcotics.

Before the Paroxysms of Intermitting Fevers, Narcotics are not improper, providing the first Passages be well clean'd, and they be season'd with *febrifuga's*. Otherwise they'll fix and settle the morbidical matter, by tying up the Spirits which should carry it off. But since the use of Narcotics in Acute diseases is distinctly explain'd in my *Treatise of Acute Diseases*, I shall therefore confine the present enquiry to Chronical Distempers, such as Melancholy, Dotage, Epilepsies, Love Madnes, &c.

Narcotics are universally approv'd in Nocturnal Coughs, Catarrhs, Rheumatic pains, &c. Tho they reach not the Cause of the disease, yet, they mitigate and appease the Symptoms.

In the Colic and Gout, the Violent pain obliges us to make use of 'em. But some Physicians considering, that while the parts are render'd insensible, they are exposed to the sharpness and fury of the humor; have therefore chose to joyn Purgatives with Narcotics. Thus *Rhumelius's* Gout-Pills are made up of two drams of Aloes, half a dram of Laudanum, to be divided into four doses, and exhibited in Wine four hours before Eating. Others follow the same method in Colics.

In Dysenteries, Epilepsies, and Love Madnes, Narcotics especially Opium are highly serviceable. In Dysenteries they ought to be mix'd with precipitating Medicines, and usher'd in by Purgatives; In Love-Fits we joyn 'em to Hysterical Ingredients. *Bartholine* tells you he knew a Woman cur'd of 'emby Opium alone. The truth is, if it be not mingled with such Ingredients as defeat the Acid in the first passages, 'tis apt to cause Vomiting, and does not pro-
cure

cure Sleep, tho it be given in a large dose. In Epilepsies we are wont to mix Opium with Camphir to keep off the Fit.

'Tis doubted whether Opium, Laudanum and other Narcotics are proper in Melancholy Doatings; Vanhelmont fancied they disturb the Spirits, and therefore excluded 'em: But his Reason is nought. The true Reason why they are suspected is this: If they meet an Acid in the first Passages, they fatigue and disorder the Patient, and forfeit all their Pacific qualities. Now if we clear the first Passages before hand, or prepare the Opium so that Acids will not render it Emetic, then it may safely be exhibited; or we may mix it with Purgatives. For tho either Purgatives or Narcotics taken a part in this disease, will cause many disorders, yet in mutual Conjunction they prove very serviceable. The Purgatives defeat the Acid by their sharp Salts, and the Opium at the same time atones for the tumults they are wont to occasion.

As Narcotics seasonably admittred are very serviceable; so an unseasonable timing of 'em may produce very dismal effects. There are some Evacuations contrary to nature, and there are others directed and regulated by it. Sometimes the Spirits put the noxious humors into fermentation, and so occasion their getting out: Sometimes the Stomach and Guts being cramm'd with sharp humors, and the Spirits contracting their fibres, nature takes occasion to expel the fatal Enemy. Sometimes the Vessels are so repleat with Blood, that its rarefaction would make 'em burst. Sometimes we meet with bigbelly'd Women, whose first Passages and Vessels are much crouded. In all these cases Narcotics are very pernicious. On the one hand they lock up the sharp humors which injure the Parts, and cut off the succor of the Spirits which might beat 'em off. On the other hand; supposing a large quantity of Blood, they retard its motion, and prevent the straining out of the Juices; by which means

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The pernicious effects of Narcotics.

the Blood corrupts; at the same time they imprison the Spirits which might animate and strengthen the Parts, and consequently expose 'em to the destroying Enemy. If Opium be given to a highbellyed Woman, it retards the motion of the humors, so that the Child is depriv'd of its nourishment, and the Woman in danger of Miscarrying.

To avoid these inconveniences, we should never exhibit Narcotics in the beginning of Evacuations, nor when the first Passages are stuffed with Crude or sharp Humors. And therefore if the Evacuation be not sufficiently advanc'd, we must administer a Purge once or twice before we venture upon 'em. In Colics, if the Pain be very violent, and like to be inflam'd by the Purgative, we may add Narcotics to it as above directed, in order to take off the humor, and mitigate the Pain.

*Cautions
prepara-
tory to
the use of
Narcotics.*

Before we administer Narcotics we ought to be well satisfied that the Person is Vigorous, Active, and free of any drowsy disposition or difficulty of Breathing. For we often times see Opium and other Narcotics inflame Asthma's, and increase the difficulty of Breathing, what by fixing the Lymph or Blood, or intercepting the Spirits allotted for the Muscles of Respiration. For the same Reason violent Narcotics ought to be avoided in Pleurifies, Empyema's, and in the height of Acute Fevers, providing the fermentation of the Blood be not strong, nor the motion of the Spirits Impetuous; especially if the Person be not molested with doating, immoderat watchfulness, or a difficulty of making Water.

Silvius does wisely observe that the best precaution to be used in the administration of Narcotics, is to exhibit them in small doses, and repeat 'em the oftner. To which we may add one Caution more; namely, that strong Narcotics such as Opium should never be given by themselves; they ought to be joyn'd to Volatil Medicines, such as

Cassia,

Castor, Vipers, Ambergrise, &c. which divide and break through the Gluy matter that might intangle 'em ; or, which is better, to fix'd Alkaline Salts, which do not occasion so great an agitation.

Sometimes strong Narcotics cause Lethargies and immoderate Sleep, by means of the Exaltation of their Sulphureous Particles ; In this case we must have recourse to Acids. For we find such Creatures as are stocked with Acids in the Stomach, are not so easily influenc'd by Opium as others. *Willis* presents us with a story of a Dog that had swallow'd two drams of Opium in Soupe. Soon after he became stupid, and in half an hour after voided a great deal of stinking matter both upwards and downwards : In fine, in an hour he became perfectly well and brisk. Now 'tis plain the Acid ferment of the Dogs Stomach, had mortified and kept under the Narcotic Sulphur of the Opium.

The four large Cold Seeds Incrassat and procure Sleep ; by virtue of their tenacious parts which fetter the Spirits. We may use 'em in Ptisanes, but commonly they are made into Emulsions with sweet Almonds and some convenient Syrup. They extinguish pain, and compose the Blood. Accordingly they are of Excellent use in Inflammations ; and by reason that Inflammations in the Neck of the Bladder do frequently cause a suppression of Urin, are listed into the number of Diuretics, as being fit to remove the Inflammation and so procure Urin. Every one of these Seeds may be given a part to half an Ounce. Lettuce, Succory, and the Juice of the flowers of red Poppies, do all procure sleep, but in different fashions. The former two compose the Spirits by their soft and quiet parts ; the last intangles 'em in thick Sulphur.

The Cold Seeds.

Gentle Narcotics.

Tobacco is seldom made use of, unless it be by way of smook among Souldiers, or to mitigate the Tooth-ach. A continued use of Tobacco will

Tobacco.

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occasion

occasion the same disorders as Opium does to the *Turks*, or Wine to Drunkards, that is, it fetters and engages the Spirits, and intails a stupidity to all Animal Actions.

There are many other Narcotics, might be aded to the Account, particularly, the Thorn Apple, Hemlock, Hounds tongue, Mandrake, Henbane, and Nightshade; But they are commonly appropriat to external uses. However, *Bartholetus* makes a sleeping liquor of the Thorn Apple, which he gives from half an Ounce to one; and an Extract of the same with Lettuce Water mix'd with Saffron and Oyl of Citron Peel. This Extract he Christens Pills of *Stramonium*, and recommends it for animating Melancholy Fools, stopping Fluxes, &c.

Poppy.

Perhaps 'twill not be improper to give a more particular description of these Plants.

Poppy contains some volatil Salts, a great deal of Oyl and Earth, with some Acid Phlegm. 'Tis a powerful Narcotic, and affords an infinite number of preparations, which seasonably administer'd will produce admirable effects. But if they are indiscreetly exhibited, there's no poyson in the World more fatal. The Juice of White Poppies dry'd is call'd *Opium*. 'Tis a Gum Rosin, which neither dissolves well in Spirit of Wine, nor in Water. But Brandy unrectifi'd or Wine will dissolve it quite, as being partly Rosinous, and partly watry Vehicles. Their Sulphurous part dissolves the Rosin of the Opium, and their watry part melts the Gum. It ought to be well clean'd of the trumpery 'tis mix'd with before we have it; and then may be given safely from one to two grains in Venice Treacle or any Opiat. For my part, I choose rather to dissolve it first in Brandy, Wine, or Water impregnated with the fix'd Salt of Tartar, because it may meet with Phlegm in the Stomac that may hinder its dissolution; or perhaps, if it linger too long in the Stomac may fix the
Spirits

Spirits that sojourn there, and so waste and consume its own vertue. Give it which way ye will, if the Stomac be cram'd with humors, 'twill provoke to Vomit; because, tho the Spirits are intrangled by its Narcotic faculty, yet since new supplies are always measur'd out, and the natural strength of the parts is impair'd, they will necessarily be liable to contractions.

Opium is purifi'd several ways. Some dissolve it, as I intimated but now, in Brandy, pouring the Solution into a clean Vessel, to be evaporated, to the Consistence of Hony: Others dissolve it in Rain Water filtrated, then they pour off the Tincture by Inclination, and dry what remains: Upon which they draw a second Tincture with Spirit of Wine, and pour it into the first, to be evaporated together to the Consistence of Hony. These preparations are called the Extract of Opium, or Laudanum: But to my fancy 'twere better to add some other Ingredients to correct it; for this method may purify but not correct.

Opium.

Upon the taking of Opium, the Person is first easy and quiet; soon after the Pulse begins to rise, and then a fine sweat breaks forth. Upon the first view such things would seem to oppose the former advances: But we may satisfy our selves by considering, that Opium having stop'd the course of the Spirits for some time, does afterwards animate and push 'em on by vertue of its Volatil and Sulphurous parts. Thus 'twill naturally follow, that the Pulse will be highten'd. Besides, the Spirits having broke thro and overcome the Curbing Medicine, must of course move more impetuously than before, because the parts of the Blood are render'd more bulky, and consequently more apt to receive and retain a moving impulse: Now 'tis no wonder the extraordinary motion should terminat in sweat. Poppy-seed is also used; but 'tis much short of the vertues of Opium. But the Husks of Poppy heads are very

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Narcotic;

Narcotick; by way of Decoction four or five heads will almost equal the vertue of a grain of Laudanum.

I shall not stay to dispute whether Opium be hot or cold, or whether it calls up and animates the Spirits of the People in Eastern Countries, who are said to take in a dram or two without offence. 'Tis sufficient to acquaint you, that in these our Climats it procures Sleep; that three Grains ought to be its highest dose, unless we have a mind to run the risque of our Patients lives, or unless we have try'd it often before in smaller doses. Let the *Turks* take it as they please. I'm sure a Souldier in this Country, ply'd hard with Opium, will scarce be fit for the Field. There must either be some difference in the Medicine as 'tis used in the East, or else their Constitutions are wide of ours.

The Extract of prepar'd Opium is call'd Laudanum; and is generally made use of upon the most important occasions. To avoid its bad effects, 'twill be needful to season it with Correctives, among which the Salt of Tartar, and Spirit of Turpentine are much the best. For the Salt dissolves the Phlegm that might withstand or inveigle it.

Some pretend to Correct Opium by fermenting it with the Juice of Quinces; others dissolve it in Oyl of Tartar, then pour in Vinegar, and reduce all to an Extract: From which they draw a Tincture with Spirit of Wine, and so make a sort of Narcotic liquor of *Tartarum Foliatum*. Others again ferment it with Yest, then thicken and dissolve it with Juice of Citrons: Then they thicken it again, and dissolve that in Spirit of Wine. Others mix up equal quantities of Opium, Castor, Salt of Tartar, Saffron, and other Spices: From this mixture they draw a Tincture with Wine. Others again dissolve it in some oily Volatil Salt to be given in Hypochondriacal Melancholy.

choly. Upon such occasions I use to dissolve one half of the Opium in Spirit of Wine, and the other in the Volatil Spirit of Sal-Ammoniac prepared with Lime. These two solutions I mix with a small quantity of the Tincture of Castor. In the mean time I take care the Vehicles be as fully charged with the Opium, as possible.

Henbane, by its Analysis, affords a Concret Volatil Salt, Oyl and Earth, not unlike white Poppies or Opium. The Seed of this Plant is made use of not only to procure Sleep, but to stop spitings of Blood. 'Tis given to a dram in some Conserve. The other parts of this Plant are seldom used inwardly; because they occasion troublesome and uneasy Sleep. Externally they are accounted Resolving, Anodin, and Softening. The Smoak of the Seed is recommended for Child-blains upon the hands, and for the Toothach. But the first of these diseases is better removed by the Oyl drawn from it. Some will tell you the Lymph comes out of the Skin in the form of Worms, when the Hands anointed with this Oyl are held to the Fire; whereas 'tis only the meal of the Seed that revives upon the Hand.

Henbane.

The principles of Hemlock resemble those of other Narcoticks. 'Tis not given inwardly because it fills the mind with fancies, and oftentimes occasions stubborn *Deliriums*. And yet *Re-neauime* in his Observations prescribes the Root to be taken inwardly against Schirrus's, to a dram in Substance, and two Drams in Infusion. But, I take it, 'tis more Narcotic than Aperitive. If it be bruised and applied outwardly, it resolves and mollifies. Its Juice is sometimes applied by it self for the same purpose; sometimes 'tis mix'd with Gums in the form of a Plaster for hard Tumors, especially for the Schirrous swellings of the Bowels. The Herbs boyld in Chervil Water and applied to the Breasts, is said to diminish the Milk, and prevent its Curdling and hardness.

Hemlock.

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Hounds-

Hounds-tongue.

Hounds-tongue is a Narcotic, Pacific Plant. It abounds in Volatil parts, and a stinking Oyl, mix'd with Earth and Acid Phlegm. The Root may be used in Ptisanes, or Broth, for mitigating the pain in Claps, and stopping Catarrhus Coughs. The Juice of this Plant is given in Pills for the same purpose; and withal applyed outwardly to dissolve humors and mitigat pain.

Mandrake

Mandrake affords almost the same principles with other Narcotics: 'tis seldom used inwardly by reason of its Violence. Its Root and Juice are good to dissolve and pacify. Upon which account both they and their distill'd Oyl are applyed by way of Plaister and Cataplasms, to hard swellings.

Nightshade.

Nightshade, also, belongs to the Narcotic Family. I had occasion to speak of it, under another Head. I shall only add that the Fruit of Mad-nightshade is apt to disturb the Mind. However their Juice is by some prescribed to a spoonful against Dysenteries and Defluxions.

A List of Narcotic Medicines.

External.

L *Leaves and Roots of Henbane, Night-shade, white Poppy, Hemloc, Mandrake; in Cataplasms. Opium, to a dram, in Plaisters.*

Internal.

Roots of Hounds-tongue, Husks of Poppy-heads, Lettuce Leaves, Roots of Water Lillies; in Ptisanes.

The four Cold Seeds, white Poppy-seed, Henbane-seed; in Emulsions.

Saffron, to thirty grains.

Opium

Opium from half a grain to two.

Chymical Medicines.

Waters of Lettuce and Water Lillies ; from half an ounce to four.

White Poppy Water ; from half an ounce to two.

Laudanum ; from one to three grains.

Pills of Stramonium ; from one to two grains.

Sala's Narcotic Extract of Vitriol ; from six to twelve grains.

The Forms of Receipts.

A Liquid Laudanum for Dysenteric pains, Watchings, violent Tooth-aches, and other pains.

Take two ounces of good Opium, an ounce of Saffron, a dram of Cinnamon pulverised, a dram of Cloves in Powder, mix all with a Pound of good Spanish-Wine : Exhibit the Tincture from fifteen to thirty Drops in a Convenient Vehicle. Besides the Internal use ; ye may also wash the Mouth with it for the Tooth-Ach.

Willis's Liquid Laudanum call'd Laudanum Helmontianum.

Take the Juice of Quinces and ferment it with the yeast of Beer, add to it Opium and Saffron ; so extract a Tincture to be strained, aromatised, and evaporated till one half be consum'd ; what remains is Liquid Laudanum, to be given from fifteen to twenty Drops. If ye evaporat what remains in the Colander, ye have a solid Laudanum to be given from one to two grains.

Laudanum Tartarised.

Willis gives yet another description. 'Tis this: Extract the Tincture of Opium with the Tincture of the Salt

Salt of Tartar; then add Saffron, Castor, Cloves, and Aloes Wood. The dose of this Tincture comes between fifteen and twenty five Drops. But I cannot much approve this Preparation. 1st, Because the Spirit of Wine will not be able to extract the Gummy part of the Opium, especially when 'tis charged with the Tartar already. 2^{ly}, Salt of Tartar thus prepar'd is not a proper Corrective for Opium, the Spirit of Wine having only extracted its Sulphurous parts. I would chuse to mix the Opium with Juice of Quinces, and then add the Salt of Tartar, after Langelor's method; or else, in imitation of Zuelfert, dissolve the Opium in Cinamon Water, and precipitate with Salt of Tartar.

A Tincture of Opium to be used in Inflammations of the Bladder and Doatings.

Take dry'd Opium, infuse it in Juice of Limons till it extract a red Tincture; then pour off the Tincture and put in fresh Juice; mix all the Tinctures together, and reserve 'em for use.

All the Preparations of Opium ought to go upon the design of augmenting its Rosinous, and depressing the Gummy part, as in the first preparation; or else of heightening the Gummy, and depressing the Rosinous part, as in the last Preparation. By this means it becomes fitter to pacify the Blood. If ye please ye may mix it with fix'd Salts, as Laudanum Tartarised with Salt of Tartar, to the end that the Acids it meets may not be able to over-fix its Sulphur, and fetter its active powers.

For the Toothach and Itch on the Hands.

Take Henbane-seeds, throw 'em upon burning Coals, and receive the Smoak at the Mouth with a Funnel; or if the Hands are the parts affected beat 'em upon the Steams; then wash 'em in Cold Water, and beat 'em over again; repeating the Alternat succession several times. The People fancy that by this means, Worms
come

come out of the Hands and Teeth, because the Seed when it burns appears in the form of little Worms.

A Narcotic Extract of Vitriol, for mitigating pain, curing Epilepsies, and procuring a moderate Sleep.

Take half a pound of Vitriol, pulverised, and dry'd till it become White. Pour upon it thirty Ounces of Spirit of Wine well rectify'd. Let 'em stand in a dry close Bottle in Horse dung for the space of a Month. Pour the liquor gently off from the Dregs and distil from it a Yellow Liquor like Oyl, which is the Extract, to be given from six to twelve Drops. Authors promise mighty feats from it, but Experience oftentimes disproves the Assertion.

CHAP. XV.

Of Stiptic and Astringent Medicines.

WE shall discourse in this place of Styptic and Astringent Remedies; seeing we use them against irregular Evacuations, as well as these which stupify and incrassat.

By astringent Medicines, we understand such as correct the Wateryness of the Blood, and retrieve the tone of the parts, and thereby hinder the

What Astringents are,

There differenc.

the Evacuation, which only the thinness of the Humors, and weakness of the Parts did occasion: This they do several ways; sometimes carrying off Serosities by Urin, Sweat, Stool, or Vomiting: Sometimes absorbing; and sometimes hindring them to act upon the parts.

Use of purging Astringents.

When the Blood is too Watery, we must not on a sudden hinder Nature to throw out the superfluous Humidity; on the Contrary we ought to assist her: However in a Looseness we must not give our ordinary Purgatives, lest we heighten the Irritation, and weaken the Tone of the Guts; but such must be used as at first evacuate by their sharp Salts, but afterward by their Sulphurs fortify the parts, and defend them from the sharpness of humours: Such as Rhubarb, Juice of Roses, Mirobalans; which first Loosen, and then Bind.

Acid Astringents.

Acid Astringents, such as Spirit of Salt, Alom, &c. which operate by Urin, must not be given in a looseness of long standing, because they throw off into the Guts a part of the Serum which they separate from the Blood, and by that means exasperate, and weaken the Fibres: But in Fluxes of Blood occasion'd by its rapid motion, and the over-thinness of the humors, Such Astringents are very proper; for they lessen Fermentation, give consistence to the Blood, and procure the Vessels time to recover strength.

Vomiting Astringents.

Emetics are only Astringent by accident, that is by diverting the matter that caused the Evacuation: 'Tis partly so that, *Ipecacuana* operates; but over and above that, it likewise kills the Ferments that caused the Looseness.

We may say the same of Sudorifics; but they are useful only in long Watery Loosnesses, occasion'd by Acids: In which case by vertue of the Volatil Alkalies and Sulphurs they are stored withal, they absorb and expel by Sweat the superfluous Serosity.

Sudorifics.

Absorbing Medicines, are either Earthy, or Stiptic: The first as it were Drink up the Serum, and give some thickness to the Blood; the others fetter the Acids, strengthen the Tone of the Parts, defending them by their Sulphur, from the sharp and Acid points which gall'd them, and increas'd the Evacuation: Of the first kind are Coral, Crabs eyes, seal'd Earth, Bole-Armeniac, Pearl, Azure-stone, &c. to the latter belong tosted Rhubarb, Pomegranat rinds, Cypress-nuts, Pomegranat-flowers, Dragon's-blood, Dwarf Cyttus, Sumach, Medlar-stones, Acorns, their Cups and Oyl, the Seed and Juice of Nettles, the Dung of a white Dog that feeds on bones, call'd *Album Græcum*, Asses Dung, Hogs Dung, &c.

Absorbents.

Earthy Stiptics.

There are other Astringents, which besides their Stiptick quality are intitled to a Glutinosity; whereby they stop the Mouths of the Vessels where the humors pass; such are Medlars, Quinces, hard Eggs, &c. and these are only to be used, when the Evacuation comes not from a redundancy of Humors, but but from the Laxity of the pores of the parts: Otherwise the superfluous Humors solliciting in vain to discharge themselves by the Guts, will recoil and carry with them horrible disorders, as *Fernelius* says he has often observ'd.

Astringents that increase.

Some Astringents in fine, partake at once of the Nature of these last, and of that of Stiptics; that is, they thicken the Blood by cramping its fermentative principles, and also destroy its gross and

Mix'd Astringents.

and congealing Acids. Such are Plantain, Knot-grass, Horse-tail, Frogs-spawn, and their distill'd Waters.

Use of Astringents.

We must never use Astringents in the beginning of Fluxes, especially when the first Passages, or the Vessels are too full; because a Loosness or Bleeding is healthful when moderat, and not weakening. Neither ought we at first to stop a Vomiting, but assist it with some Emetic, if the Stomac is over-charged: And when 'tis convenient to stay it, we may use Stiptics mix'd with some Acids; which last compose the sharp particles that irritate the Stomac.

A Physician can never be too cautious, in Correcting or assisting Nature; for sometimes she but faintly expels hurtful humors, and must be furthered: And sometimes she is so disturbed with straining her self to exclude the evil, that the Fibres are unbended, and give way to the good as well as the bad Humors. This must be redressed so soon as possible.

Contrary indications.

We must take great care not to put a stop to Critical Evacuations, which are only a consequence of that Endeavour Nature uses to drive out the peccant matter that gave rise to the Disease.

Astringents must be taken rather in some Conserve or Opiat, than in a liquor, which weakens their Operation, and increases the Moisture we purpose to diminish. Absorbents are given to half a Dram or two Scruples, as well as most Stiptics; but if we mix them with Astringent Waters, as that of Plantain, or Knot-grass, we give them to a Dram or more.

From this general Rule we must exempt Acid Spirits, which can scarce be given without other Liquors, and yet will have a desirable effect being mix'd with Syrups, and Juleps to an agreeable Acidity: they are of wonderful Vertue in all bleedings caused by the rapid motion of the whole Mass; but if the bleeding be occasion'd by its Viscidity, as it sometimes falls out, then 'twill be needful to exchange them for things of an alkaline Nature, as Sugar of Lead, Poterism's Anti-Hectic powder, Iron, &c. and by strong Purgatives, retrieve the motion of the Blood.

It may possibly be expected, that we should here treat of Vulneraries; which for most part are Stiptick, and abound with Sulphureous and Balsamic parts; but by reason they are chiefly used in External Wounds and Ulcers, we have chose to throw 'em back to the latter part of this Treatise.

I shall not treat in particular, of the Remedies we have here nam'd, having done that sufficiently, under the Heads of Emetics, Purgatives, Diuretics, Sudorifics, and thickening Medicines; and especially these which stop the Terms, Whites, or Lochia: I shall only by the way add a word or two of Cypress, Galls, Pomegranat flowers, Pomegranat rindes, and Dragons blood.

Cypress affords by distillation, a Volatil Acid, and much Oyl mix'd with sharp Salts: The Leaves are much commended Inwardly in Hypochondriac Distempers; the Nuts are used both Externally and Internally in bleedings: By their Oily parts, they guard the Fibres from Sharp and Acid humors; and therefore are recommended in spitting of Blood, Dysenteries, and in Incontinency of Urin.

Cypress

Galls

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Galls.

Galls may be used both Inwardly and Outwardly, in the same Distempers with the Cypress Nut ; they contain much alkaline Matter, and Oyl ; and accordingly precipitate the Solution of Vitriol better than Myrobalans, powder of Oak, or of Acorn cups, and even better than that of Cypress ; any of which we may use, to try if Mineral Waters partake of Vitriol. The Decoction of Galls mix'd with a Solution of Vitriol and Alom, may be used to check Gangrens, and clean Ulcers.

Pomegranat-tree.

The Pomgranat tree, both Domestic and wild, bears Flowers and Fruit : the Seeds and Rind of the Fruit, are very Astringent ; and contain some Acid Phlegm, and Volatil Salt, and much Oyl : They are used Inwardly against spitting of Blood, Loosness, and Vomiting ; and Outwardly in Astringent Decoctions ; the Flowers of the Wild kind have nigh the same Principles and Vertues : They are used in Decoctions with Alom for Ulcers of the Mouth ; a powder made of them, or of the Rind of the Pomegranat, may be used to restore the fallen *Uvula*.

Dragons blood.

Dragons blood is a Gum-resin extremely Astringent : It is given Inwardly from half a Dram to two Scruples, in powder or Opiats against Rheums, Coughs, Spitting of Blood, &c. outwardly we use to mix it with Astringent powders, and apply 'em to stop the Blood when the Vessels are wounded.

A LIST of Stipticks or Astringents.

Rinds of Pomegranats, from a Scruple to a Dram.

Citron-peel dry'd, from one Dram to two, twice so much in Decoction.

Leaves of Wormwood, and the curl'd Vine, from a Scruple to a Dram and a half in Substance, and in Decoction from half a handful to a whole one.

Plantain and Knot-grass from half a handful to a whole one in Decoctions.

Seeds of Medlars, from a Dram to one and a half.

Cypres-nuts, from half a dram to a whole dram.

Flowers of the wild Pomgranate-tree, from half a dram to a whole one.

Spicknard, from a Scruple to a Dram.

Cloves from half a scruple to two scruples.

Mastick, from half a dram to a dram.

Dwarf-cistis, from half a dram to two scruples.

Pulp of Quinces, from a dram to half an Ounce.

The Acorn and its Cup, from half a scruple to half a dram.

Powder of the Stomach and Guts of a Pullet, of the Bladder of a Hog or Sheep, from half a dram to a dram.

Powder of Red Roses, from half a dram to two drams.

Rhubarb, from a scruple to a dram.

Red Coral, from one to two scruples.

Roots of Tormentil, to two drams in decoctions.

Dragons-blood to half a dram.

Amber, from six Grains to half a dram.

Seed of the wild Rose, from half a scruple to half a dram.

Crabs-Eyes, from half a scruple to a dram.

Seal'd Earth, from a scruple to a dram.

Bole-armoniac, from a scruple to a dram.

Red Wine, from a half to a Glass full.

Chalcitis,

Litharge and Ceruse, } Externally.

Ass's and Hog's dung,

Vitriol and Alein dissolv'd, from half a scruple to thirty grains.

A List of Stipticks

Chymical Remedies.

Extract of Rhubarb, from ten grains to two scruples.

Salt of Lead, from two to ten grains.

Waters of Plantain, Roses, and Knot-grass, from one to four Ounces.

Stiptick-water, from half a dram to two drams.

Lapis Medicamentosus, eight grains dissolv'd in four Ounces of an astringent Injection.

Extract of Tormetil, to two scruples in a Potion or Opiat.

Astringent Saffron of Mars, from fifteen grains to a dram.

Extract of Steel, from six grains to two scruples.

Antimony Diaphoretick, from six to thirty grains.

Poterius's Anti-bellie Powder, from ten grains to two scruples.

Oyl of Acorns, from ten grains to an Ounce.

Gelly of Hartshorn, for ordinary Food.

The green Precipitat of Mercury, from three to eight grains.

Acid Spirits, in Juleps.

The FORMS of Receipts.

A Stiptick Water, to be us'd in a Dysentery, Fluk of the Piles, Terms, &c. And Externally, when an Artery is open'd.

Take of Colcothar, or Red Vitriol which remains in the Retort, after the Spirit is drawn; burnt Alom, Sugar-candy, of each thirty grains; Urine of a young Person, and Rose-water, of each half an ounce; Plantain-water two Ounces; beat all in a Mortar, and put 'em up in a Bottle: When you would use the Liquor, you must pour it out by inclining the Vessel.

An Opiat for Loosenesses, falling down of the Guts, and other Relaxations.

Take Conserve of the Wild Red Roses, Citron-peel preserv'd, of each two Ounces; Crabs-Eyes and prepar'd Coral,

of each a dram; red *Roses pulveriz'd*, tosted *Rhubarb*, of each two scruples; *Poterius's Antiskeitick Powder*, a dram and a half; Powder of *Acorns*, a dram; mix them, and make an Opiat with Syrup of *Wormwood*, to be taken to the bigness of a Filberd in the Morning.

A Powder for such as can't keep their Water.

Take dry'd *Acorns*, one Ounce; *Frankincense*, half an Ounce; *Coriander-seed* dry'd, *Bole-Armoniac*, *Gum-Arabick*, of each ten grains; mix, and make a Powder, to be given from half a dram to a dram in a glass of red Wine.

To stop Vomiting.

Take a dram of the Salt of *Wormwood* in the Juice of Lemons.

Tho' Fix'd Salts seem to destroy the Virtue of Acids, and Acids that of Fix'd Salts; yet this does not scare us from joining them, and that with good Success, as appears from *Crollius's* Potion for Fevers, *Vitriolate Tartar*, *Sal Vegetabile*, and many other good Medicines.

Syrup of Quinces.

Take three pound of well purify'd Juice of Quinces, and two pound of Sugar; boyl 'em gently, and add towards the end two Ounces of *Cinnamon-water*, drawn without Wine or Brandy. This Syrup is excellent in a Looseness, and may be mix'd with *Ptisans* or *Potions*, from half an Ounce to an Ounce.

Syrup of Coral.

Take a quarter of a Pound of red Coral, ground on a Porphyry; pour on it a Pound of well-purify'd Juice of Lemons, and leave it forty eight hours in a Sand-beat, and after pour it off by Inclination; add to it three Pound of Sugar-candy in Powder, and leave it again in a Sand-beat, and you shall have a Syrup of Coral excellent against Vomiting and bilious Loosenesses. It may be given from half an Ounce to an Ounce in *Potions* or *Ptisans*.

C H A P. XVI.

Of Remedies for Fevers.

*The Un-
certainty of
Febrifuges.*

A Fever is a very common Distemper, and a numberless train of Remedies is given in to make head against it : But there's little stress to be laid upon them : Some of 'em will operate upon one, and have no effect at all upon another ; and a Remedy which has been cried up one Year, falls under dispute the next, because the nature of Fevers and Mens Constitutions alter every Year. The following History may serve for sufficient proof.

A certain Inhabitant of *Laval*, with one Dram of the Seed of Dwarf elder, cured all that were seiz'd with Fevers for one Year ; next Year he gather'd a great quantity of that Seed, but had the Mortification to find it altogether uneffectual ; yea, and in effect as hurtful this Year as it had been beneficial the preceding, for most that took it dy'd. So he was forc'd to throw away what he had purchas'd with great care.

It is well known, the Jesuits Bark did some Years ago cure the most obstinate, intermitting Fevers ; but now adays we see it often fails, and sometimes occasions disorders : And 'tis probable the lesser Centory so much esteem'd by the Antients, was then a good Remedy, tho' now it is of little use.

*The Nature
of Fevers.*

A Fever being nothing else but a Fermentation of the Blood, is cur'd by whatever checks that intestine commotion : But for so much as Fermentations are often rais'd by Nature in order to expel some offensive business from the Mass of Blood, they ought not to be thwarted till Nature obtain the ascendant. Hence Spirit of Vitriol, cooling Ptisanes, Emulsions, Barley Water, Almond Milk, and almost all the Remedies order'd by some Physicians to so little purpose in continual Fevers, do only for a time eclipse their Ardour,

*Incrassants
pernicious.*

dour, which after returns with greater violence. Wherefore amongst Remedies for Fevers we shall not reckon up things that Incrassate, but pass on to those others which Physick affords.

Evacuating Medicines are oftentimes Specificks in this Disease: Sometimes the Stomack and Guts are *Purgatives* stuff'd with Acid or bilious Humors, which being afterwards mix'd with the Blood, occasion the Cold and *and Eme-* ticks. the Heat of intermitting Fevers; in this case a Vomit gives great Relief: Sometimes also in continual Fevers the first passages are embarrass'd; and no Specifick can operat till they are clear'd: But if the first passages are open, the Salts will oftentimes precipitat the Ferments of the Fevers.

If the Ferment that gives rise to the Fever is *Sudorificks*, tile, it may be carried off by sweating; but the mischief is we have no certain Sudorifick. *My Father was very happy in the Infusion of Jalap.* It seems that Medicine, which commonly purges, changed its Nature, when given in the cold Fit of an intermitting Fever, the patient being well covered: I have seen him give it to above an hundred Persons in the Year 1683. None of them were purged by it; but all of them by sweating were freed from their Distemper. I cannot say so much for its success in the following Years; however it has often done good, and never hurt. Rose-water given in the beginning of a Fit has often cur'd the Fever: It operates by sweat, as Carduus Benedictus, Mead sweet, Baum, &c.

The Remedies, which neither sensibly Evacuat, nor incrassat, because of their volatile parts; operat either by absorbing, and dulling the Ferments of the Humors, or by giving Fluidness to the Blood. Such are Diaphoretick Antimony, Poterius's Antihectick, Crab's Eyes with Sugar of Lead, fix'd Salt of Wormwood or Tartar with Crab's Eyes in Wine, prepar'd Hartshorn, Coral, Pearls, *Timeus's Febrifugum*, Powder of Oyster-shells, &c. *Precipitating Remedies.*

The lesser Centory, Camomil Flowers, Gentian, Masterwort, the Vomiting Nut, the Bark and *Sulphureous Medicines*, Flowers of the Peach-tree, Cichory, and the Bark of

the Ash-tree, these Medicines absorb and blunt the Acid Ferments of the Blood and Humors, and also impart oily and volatil parts which promote transpiration: of these we may make Ptilanes, Infusions in Wine, and Opiats, but without Sugar or Hony, because they are stor'd with Acids, which stop the pores of the other Ingredients, and lessen their Vertues.

Quinquina.

The Jesuits Bark is taken from a Tree not unlike our Ash. Some have thought that it fixes the Humor which causes the Fever. But seeing it is bitter and contains some volatil Salts, much Oyl, and but little Acid, it must of necessity drink up the Acids that congeal the Blood, and so render it more thin, whereby it is put in a Condition to free it self from hurtful Humors. But we must take care not to dissolve the Blood too much: And it will be very expedient first to give some Purgative, to lessen somewhat its quantity; lest the Vessels, being over distended with the dissolved Blood, pour out the Serum upon the parts, and so occasion a Dropsie, which I have frequently seen. It sufficiently appears that this Bark dissolves the Blood, because Blood mix'd with its Infusion will not congeal, and what is already coagulated will retrieve its primitive liquidness.

This Medicine is prepar'd several ways. Some give it in a Bolus, from half a Dram to a Dram; but it often stays in the Stomack, and mixes but little with the Blood; and so destroys the first concoction, and weakens the Stomach, by spoiling its Ferments. To prevent these Inconveniences it may be mixed with some fix'd Salt; as that of Wormwood, and given in some Syrup.

Some infuse an Ounce of the Bark, for some considerable time in a quart of Wine; this Method would be more profitable if the Wine did not become sour, and by that means rob the Medicine of its Vertue. Some there are, who with common Water and Brandy, endeavour to draw out its watery and sulphureous Parts; thus prepar'd it opens better and we may heighten its force by adding to every Dose some Drops of Liquid Laudanum. But since the patient is often-

times

times oblig'd to take these Liquors when the fit approaches, we have Reason to fear, lest the tumult of the Blood, being by the Brandy carried to the Head, cause therein pains, Deliriums and other Accidents. But the best liquid Preparation is, to boyl the Powder of this Bark with a fix'd Salt in common Water, whereby we obtain both its Oyl and Saline parts; and at the same time the lixivious Salt, by dispersing the Sulphur, procures an easier admission to the Watery Menstruum.

Although this Bark has been esteem'd as an universal Remedy for Fevers of all sorts; yet we find that it has scarce any sensible effect in continual Fevers and double Tertians: But in Fevers which intermit by longer intervals its Vertue is considerable: If it be taken in the Fit, or a little before, it inflames the Paroxysm; whereby it appears that it destroys the Ferment, by putting them in motion. But oftentimes these Ferments which seem to be dissolv'd, after fifteen Days bring on the Fit with as much violence as ever; because they were not altogether quell'd by the parts of the Remedy, as being too weak, unless Universals have been premis'd. Possibly some volatil or fix'd Salts might produce nigh the same effects; and indeed, Sal Armoniac and all its Preparations are of excellent use in intermitting Fevers, but especially in Quartans, Fix'd Salts are given either by themselves, or mix'd with Crab's Eyes, or diaphoretick Antimony, and give sure relief not only in intermitting, but also in continual and Malignant Fevers; as being very apt to check their Ferments. Volatil Spirit of Sal ammoniac must not be given in the middle of a Fit, no more than volatil Salt of Tartar, but in the intermitting Days, or just before the Fit, in order to abate its violence. As for the other Remedies, they may be given at any time, even in the beginning of Continual Fevers, which I have seen often cur'd by the use of purgatives and Diaphoreticks. Some Drops of a chymical Oyl, as of Rosemary, &c. dissolv'd with Sugar in a Sudorifick Water; and given in the cold Fit of an intermitting Fever, are very much commended.

Of Remedies for Fevers.

We may also use at that time fix'd Salts, mix'd with Acid Salts; as Tartar prepar'd with vitriol, *Crollius's* potion against Fevers, which is made up of a Scruple of Spirit of Vitriol, half a Dram of Salt of Wormwood, and six Ounces of Cichory Water; or else we may use Salts, that contain both Acids, and Alkalies; as Niter, Crystal Mineral, &c. for since the Ferments of Fevers consist not in a simple Acid, but in a certain sharp Acid, they may be corrected by Acids of a different stamp, almost as well as by Alkalies. Burnt Hartshorn given from half an Ounce to an Ounce in the Water of some cooling Plant, is much commended for any Fever, and operates as other Alkalies. *Vanbelmont* recommends the volatil Salts of Rue, Sage, Marjoram, and Rosemary, tho' they don't much differ from other volatil Salts: I doubt not but the volatil Salt of Tartar, which may be easily drawn in great quantity from Lees of Wine, is as good as that of other Plants. He also speaks of another *Febrifugum*, made with *Vigo's* Powder, probably the red precipitate, on which he pours the Element of Fire drawn from the Vitriol of Venus, that is, as I take it, the Acid Spirit drawn from Crystals of Copper, which *Paracelsus* and he have elsewhere much commended. He cohobates it five times with *Aqua regia*, and towards the end encreases the Fire in order to fix it; he distills the corrosive Powder ten times with Spirit of Wine, renewing the Spirit each time, and after with whites of Eggs. *Poteries* gives us another Sudorific precipitat, made of a Mixture of Tin and Mercury, upon which he burns the Spirit of Wine, &c.

If this be a true Sudorific, as he observes, it is undoubtedly excellent in Fevers, as are all Sudorifics drawn from Minerals, which have some Solid Particles that pass unchang'd unto the Mass of Blood, and therefore are more capable to produce the desir'd effects. And tho' the *Diacetateffe Helmontii* or purgative Sudorific describ'd by Mr. *Charas*, does not answer *Vanbelmont's* ambiguous description; yet I much esteem it for curing Fevers, and other Distempers, wherein he says his is wonderful. *Vanbelmont* gave his only to eight Grains,

Grains, but that of Mr. Charas may be given to thirty. However, seeing the Medicines, which those mystical Authors have not conceal'd from us, don't answer the Encomiums they have been pleas'd to bestow on them; we may be sure, those others, did we know 'em, would prove no less defective.

The Febrifuge describ'd by Mr. Charas, without *A Febrifuge*. naming any Author, is also an Excellent Remedy. 'Tis this. Take an Ounce of Cinnabar of Antimony, two Drams of common Salt burnt, with three Ounces of Oyl of Sulphur in a glass body, set 'em to digest two Days with the heat of Ashes; the moisture being evaporated, and the Mass wash'd, dry'd, and pulveris'd, it must be mix'd with three Ounces of the Flowers of Brimstone: The Vessel is set on Coals, and with a little Iron Rod the Mass is stirred till the Flowers are consum'd; then the Spirit of Wine is pour'd upon it to the highth of three Fingers, which must also be evaporated: This you may give to fifteen Grains in some Cordial Water, half an hour before the Fit of an Intermitting Fever: It powerfully procures Sweat.

Opium is also a Remedy for Fevers: It allays the Commotion of the Blood, swallows up Acids by its bitter Parts, or dulls them with its clogging Sulphurs, or finally carries them off by its Volatil Parts, through the Pores of the Skin: But it must be mix'd with Volatils, and particularly with the Volatil Spirit of Sal Armoniac, if we would have it answer Expectation.

We shall not here Examine, whether Blood-letting is a Specifick in Fevers; since our design is not to Write a Practice of Physic; but to shew how Medicines Operat in Curing Diseases. Neither is it our present intention to teach how, and with what precautions, these Remedies are to be us'd: These who are desirous may read what we have said in our Practice on acute Distempers, where we treat of each Fever in particular.

We shall only here speak a little to these two things, viz. Whether one may be allow'd to drink in the Fit of an Intermitting Fever, or the Exasperation of a
continual

Of Remedies for Fevers.

continual Fever, and if Wine be at any time a proper Liquor in Fevers.

As to the first we answer, that Drink, especially when 'tis not much charg'd with Juices of Plants, does undoubtedly dissipat and hurry along with it the Ferments of the Blood, which cause the Fever, excepting Quartans, where the Ferments being extremely Earthy, can't be dissolv'd by ordinary Drinks: Upon the whole, we ought to drink but sparingly, except in the Fit, when the Ferments being in motion, are more easily carried off; and in a Quartan, mix some Stomachick with the drink, which otherways would exceedingly weaken the Stomach.

As for Wine, we shall shew, when we come to speak of Cordials, that since it is good in Malignant Fevers, there is no reason why it may'nt be drunk during the Remission of the continual, and the Interval of Agues; The only ill that may ensue, is a slight Delirium, which may be prevented by diluting the Wine. The Remedies for Malignant Fevers, are accounted for under the Head of Cordials.

I shall not further enlarge on the Sudorific Remedies for Fevers, having Discours'd them elsewhere: my present business shall be confin'd to such Medicines as are apply'd Externally in Fevers, by some call'd Amulets. *Vankelmont* do's mightily cry up a Plaister for Quartan Fevers, but according to his custom do's not oblige us with its Description; some think it is made of the Juice of Tobacco, boyl'd with Hony and Wax to the Consistence of a Plaister, and apply'd to the Spleen, after the place has been rub'd with Oyl of Capers. *Etmullerus* gives us the discription of a Plaister from *Dr. Michael*, which is made of an Ounce and a half of shining Soot, six Drams of Turpentine, one Dram of Cob-webs, two Scruples of Camphyr, and a sufficient quantity of the Oyl of Spiders, for this Insect externally apply'd is thought powerfully to Disspel Fevers. I am of Opinion that Volatils, as Oyl of Cloves, or Narcotick Volatils, as Juices of Poppy, Henbane, Hemlock, Tobacco, &c. are Remedies yet better than these. Some Authors commend

mend Roots of Crow-foot bruise'd, Garlick, &c. which are not dispicable, because of their sharp Salts. Bark of Elder beaten with Salt and apply'd in a Bag to the Arm-pits for twenty four Hours, is much esteem'd by others; but I think without cause: For neither the one nor the other of these Ingredients taken at the Mouth, whether apart, or together, have any Antifebrile quality, tho' in this Case their Parts are more plentifully mix'd with the Blood, than when they only pass through the Pores of the Skin: So that if there is any Effect, we must attribute it to the strength of Fancy.

Some in a Quartan Fever, apply to the little Finger Gun Powder wrapt up in the upper Skin of a new laid Egg: This Membrane contains a sharp Salt, which mix'd with the Particles of the Gun Powder, may help to kill the Acids, that give rise to the Fever: It is apply'd to the little Finger; because 'tis repleat with Blood Vessels. That there is a sharp Salt in the Skin of an Egg appears from the sharp Taste of a stale Yelk, which can only proceed from this sharp Salt communicated by the Membrane to that Liquor.

The best Remedies for External use, that I know, are Venice Treacle and Brandy, with which if you rub the Ridge of the Back in the cold Fit of an Intermitting Fever, you may sometimes find a good Effect. There are many other things that may be us'd outwardly in Fevers, to allay Symptoms: Some anoint the Region of the Stomach with Aromatick Oyls, to mitigate the Cold and Pain that molest that Part; and in continual Fevers they lay Leaven and Vinegar to the Soles of the Feet, to abate the Heat, and prevent Deliriums: Others to the Leaven and Vinegar add Rue Leaves, and Raddish Roots, for the same purposes: Some make mixtures of the Decoction of Crabs, Juice of Night-Shade, Sugar of Lead, &c. and apply to the Temples, to mitigate the Head Aches that accompany Malignant Fevers. Many Physicians use Blisters, and indeed they are very proper in drowsie sleepy cases.

Some

Some later Physicians have brought in the use of Clysters in Fevers, which may be good on some occasions: For beyond dispute, the Parts of Antifebrile Medicines may pass into the Blood, through the Milky Veins of the great Guts: but not being mix'd with the Ferment of the Stomach, which is the chief cause of the Fits and increase of Fevers, we may conjecture that they will Ferment but little with the Blood, and that their Effect is uncertain, since they have not reach'd the prime Cause: Moreover, Experience teaches that Clysters of the Jesuits Bark tho' strong of the Medicine, and often repeated, seldom Cure Intermitting Fevers. and frequently occasion disorders in the Continual.

A LIST of the Remedies that cure Fevers.

Asarabacca,
Emetic Tartar, } See Emeticks.

Vervain, an handful in decoctions.

Juice of wild Cicory, to three Spoonfuls, in the beginning of a Fit.

Juice of Star-Thistle, to the same dose, with the same Precaution.

Juice of Tansie, one Spoonful.

Flowers of Camomil in Powder, to two Scruples, during the Intervals.

Rosemary,
Germander,
Gentian,
Centory,

} From half a dram to a dram in substance.

Jesuits Bark,
Ash-tree Bark,

} By handfuls in decoctions.

Roots of Cinquefoil, to a dram in Powder, before the Fit.

Camphir, from two Grains to six.

Elder-bark,

Elder-bark,	}	From half a dram to a dram.
Dwarf-Elder,		
Jalap,		
Spinage-feed,		
Juniper-Berries,		
Crabs Eyes, to a dram,		
Sugar of Lead, to fifteen Grains.		
Myrrh, to half a dram.		
Benjamin, to two scruples.		
Azure-stone to a dram.		

Chymical Preparations.

Salt of Wormwood,	}	To thirty Grains.
Salt of Tartar,		
Fix'd Sal Ammoniac,		
Flowers of Sal Ammoniac,		
Volatil Spirit of Sal Ammoniac, to twelve or fifteen Grains.		

Diaphoretic Antimony.

Mineral Bezoar,	}	To thirty Grains.
Jovial Bezoar,		
Charas's purgative Sudorific,		
The Febrifuge describ'd by Mr. Charas, to twenty Grains.		
Oyl of Cloves,	}	To four drops.
Oyl of Thyme,		
Water of Carduus Benedictus,	}	To four Ounces.
of Rosemary,		
of Sage,		
Extrait of the Jesuits Bark, from twelve Grains to half a dram.		
Salt of the same Bark, from ten Grains to a Scruple.		
Soluble Chalybeat Tartar, from ten Grains to half a dram.		
Water of Walnuts, from one Ounce to seven.		
Their Extrait, from a scruple to a dram.		

Their

Of Remedies for Fevers.

Their Salt, from six grains to a scruple.

Rose Water, from one Ounce to four.

Water of Centory, from one Ounce to four.

Extract of the said Plants, from a Scruple to a dram.

Forms of Receipts.

Lemmery's Antifebrile Rosa Solis.

Take Jesuites Powder four Ounces, pour upon it Spirit of Wine till it rise four Fingers breadth; sit to your Mat-trass another, let it stand four days in a vaporous Bath; the Spirit being turn'd red, strain it thro' brown Paper; the Dose is from ten grains to a dram in some suitable Liquor.

To make the Rosa Solis, you must take half an Ounce of powder'd Cinnamon, and as much Coriander Seed, which you must steep in one Pound of Water or Wine; strain the Liquor, and add four Ounces of Sugar, and an Ounce and a half of the former Tincture: Dose, from half an Ounce to an Ounce and a half.

A Water.

Take of the Flowers of Rosemary, Flowers and Roots of Bugloss, and of Quinces, of each four Ounces; Saffron half a dram; beat all, and steep them in two pound of White Wine, and being put in a glass Vessel, set them to distill in Horse-dung. Dose, half an Ounce.

An Emetic and Sudorific.

Mix four Scruples of the Root of Asarabacca grossly beaten, and two Grains of Pepper in a Glass of hot Wine; to be taken an hour or two before the Fit, the Patient being cover'd; it will cause Vomiting and Sweat; this Medicine cures almost all intermitting Fevers, particularly Quartans. Some maintain, if this Root is finely pulveriz'd, it looses its Emetic Force, and its only sudorific; and that boyl'd in common Water it is only diuretick; but howsoever it operat, it falls not short of Expectation.

A Cataplasm.

Boyl two Ounces of Tobacco in a Quart of Wine; strain it, and add twenty great Spiders, and Turpentine, Oyl, Honey and Wax, sufficient to give it the Consistence of a Cataplasm, which may be apply'd to the Region of the Spleen, Wrists, and elsewhere.

CHAP. XVII.

Of Anti-Venereal Medicines.

BEFORE we discourse of the Medicines that carry off or destroy the Pocky Ferments when diffus'd thro' the Mass of Blood, it will be requisite to touch at such Symptoms as ordinarily begin to appear before the Blood is altogether tainted; among these we reckon a Clap, Shankers, Buboës, Warts and Wheals.

A Chaudpiss or Clap is taken either for a simple Heat and Sharpness of Urine in making Water; or for a Sharpness of Urine attended by a running of corrupt Matter, yellow or green, with Pain, and sometimes Contorsion of the Yard in Erektion; or else for a running of purulent Matter without much Heat or Sharpness of Urine, or finally for a simple Flux of Seed without Heat or pricking Pains.

This Flux of Matter, whether purulent or not, issuing from the Yard, is call'd a Gonorrhœa or Running of the Reins, and ought carefully to be distinguish'd by its particular Signs, from the Whites in Women.

Most of these Symptoms may spring from other Causes as well as foul Embracings. Some Debauchees flatter themselves with Immunity by withdrawing the Yard in a critical Minute; but to their Sorrow they'll find themselves in for it, and that the more dan-

dangerously, that the Evil lay some time conceal'd.

The Seat of these Distempers is in the *Prostata*, which being inflam'd occasion a running of corrupt Matter with Heat and Pain; if they're ulcerated, a virulent Gonorrhæa ensues, but without Heat and Pain, and if only relaxed there follows a simple Gonorrhæa; but a Heat of Urine standing by it self comes only from the saline Parts of the Urine.

Inflammations of the Scrotum.

In a virulent Gonorrhæa attended by Heat and Pain, the Patient must drink much, even to four or five Quarts a Day; and instead of Ptisanes with Herbs, you may add to every Quart of Water, two Scruples of Salt of Brimstone, Tartar prepar'd with Vitriol, or some such other Salt: If you purge at all in the beginning, let it be with Cassia and Whey; but Clysters are better; the Patient must walk little, and may be let Blood, to prevent the Inflammation of the Stones, which if it happen, after Bleeding, you may apply a warm Cataplasin made of the four Meals, Linseed Oyl, Decoction of Mallows, with a little Fullers Earth. When the Heat and Pain are gone, you may purge with Rhubarb and Turpentine, or with the Troches or the Pills we describ'd above for these Distempers; and in fine, if the Running is become like the White of an Egg in Colour and Consistence, you may purge again, and make Injections with the Stiptic Salt of Vitriol, and sugar of Lead dissolv'd in Plantane Water.

When the Running is virulent, but painless, you may give a Ptisane of Sassafras, and a small Quantity of China, as also some Pills with *Mercurius dulcis*; and next day, you may purge with an equal Quantity of Diagrid, Rhubarb and Troches Alhandal made up in a Bolus; let the Patient take Evening and Morning half a Dram of Gum Guajac, or eight Drops of Balsam Capivi with a little Sugar, and when the Matter has put off its Virulency, you may make Injections with Aloes and the Stiptic Salt of Vitriol in common Water.

Of Anti-Venereal Medicines.

129

If Caruncles happen in these Distempers, you may cure them with a little Wax-Candle charg'd with some gentle Caustic, as we shall shew elsewhere.

Shankers demand an internal Cure; as being different from Excoriations which are outwardly accounted for; after you have us'd the sudorific Ptisane, *Mercurius dulcis*, or the Panacea, and the Purgatives; you must cauterize the Shanker with the Caustic Stone, Lixivial Salts, red Precipitat, *Lapis Infernalis*, &c. then you must take off the Crust with a Suppurative, as Diachilum dissolv'd, and afterwards cleanse and dry it.

All Caustics are not equally proper for all Shankers. Red Precipitat and Infernal Stone exasperate, in a Phimosis or Paraphimosis, that is, when the Prepuce is so inflam'd, that it refuses either to cover or discover the Nut. Oftentimes the Callosity of the Shanker contributes much to these Symptoms; and they may also proceed from the Sharpness or Crowd of suppurating Matter, or from Warts.

Some use emollient and anodine Fomentations; thus the Spirit of Wine camphorated, mix'd with hot Wine, is made use of to dissolve and dissipate; Oyl of Earth-worms to unbend and discuss; others use Repercussives, such as cold Water, Juice of House-leek, Water of Nightshade with Sugar of Lead, Plantain Water sharpen'd with some Drops of Spirit of Nitre, &c. We shall not here distinguish the Cases that may oblige us to the one rather than the other; wherein we ought to be cautious, for what does good in the one, hurts in the other. But when we come to speak of external Medicines, we shall give you the Cautions relating to their Use. The Callosity of the Shankers can't be remov'd with superficial Caustics, or such things as are charg'd with Acids; but such must be us'd as swallow up Acidities.

If the Inflammation of the Foreskin is great, and the Remedies us'd operat but slowly, it will be convenient to make an Incision, in Order to draw it back.

K k

Venereal

Buboes.

Venereal Buboes are easily distinguish'd from other Swellings, in regard they appear exactly in the Groin, and roll not under the Finger, and are accompany'd with none of these Accidents, which accompany Ruptures, Plague-Sores, the Evil, &c. In a simple Bubo proceeding from the Depuration of the Mass of Blood, we may give Ptisans something sudorific to promote that Depuration; externally we may use Emollients that ripen and suppurate: when it is ripe it must be open'd with Caustics, or a Lancet, then suppurated, next cleansed, and afterwards fill'd up and heal'd. But by the way, we must all along use internal Venereal Remedies and Purgatives.

If notwithstanding all our Endeavours, the Tumor increases not, but rather hardens; we must consider if its Obstinacy proceeds from the Redundancy of the pocky Ferments, as it happens in all Symptomatic Botches; and if so, we must mix Anti-Venereal Remedies, and chiefly Mercury, with Maturatives; and internally we must give (all along) Preparations of Mercury, and Purgatives; yea we may treat such as if they had the POX to be cur'd by Fluxing: Baths and whatever moistens may do very well, providing they don't too much weaken the Patient; but if the Bubo is of a scrophulous or cancerous Nature, we must proceed in a far differing Method; of which elsewhere.

Warts.

In curing Warts we must inwardly use Venereal Remedies and Purgatives, and outwardly Caustics to make them fall off; for if you cut or ty them, they ordinarily return. The Juices of Turnsole, and Celandine, Powder of Savin with a little yellow Oker, Camphir dissolv'd in *Aqua fortis*, Spirit of Nitre, *Lapis Infernalis*, &c. are commended; and being all of a Piece, may be us'd indifferently.

Pustles.

For Venereal Pustles or Pimples, we ply with internal Remedies, and at the same time rub with Mercurial Ointments, &c. to those in the Face you must

must not use crude Mercury, but yellow or red Precipitat, which in Pomatums are very convenient.

Seeing the Venereal Poyson or Pocky Ferment *The Pocky* consists in a corrosive Acid, we must seek out such *Venom consists in, an* Remedies as may either break or at least dull its *Acid.* Points, or else throw it out of the Body.

The Ancients commended the Use of sudorific Ptisans, made of Guajacum, China, Sarsaparilla, Saffras, which are sudorific Woods; these with their Sulphurs and Salts may carry off the more volatil Parts of the Venom, by insensible Transpiration; and may also break the finest Points of the Acids; but the grosser Parts, if there are any, remain, and occasion greater Corrosion by their massive Solidity; by this Means the Body is dry'd up, and finally the Evil increaseth and sometimes becomes incurable: Wherefore this Method is now in Disuse. If it sometimes succeeded among the Ancients, it was where the Skin was thin, and the Poyson subtil, or at a time when the Disease was more benign; for undoubtedly this Distemper is more or less easy to be dealt with, according to the Difference of Constitutions, Seasons, and Countries; thus in *Germany* and *England* this Disease is more obstinate, than in *France*. *Sudorifics.*

For the same reason the Volatil Salt, and Sudorifick Water of Vipers, the Spirit and Extract of Guajacum, Extract of Balm and Carduus benedictus, and all Medicines extremely Sudorifick, so much esteem'd by some, are very ineffectual, unless they be usher'd in by other things capable to kill these Ferments. I should rather choose to use Diaphoretick Antimony, its Cinnabar, or other fix'd Alkali's, such as all the Preparations from Mercury, whether they Expel the Poyson by Vomiting, Stool, Urine, Sweat, or Fluxing.

Antimony therefore and Mercury are the great Venereal Remedies, that by their Metallick Parts Penetrate the Mass of Blood, and sweeten the Pocky Ferments.

The ordinary Method of Fluxing with Crude Mercury in Ointments or Plaisters, after Bathing and Purg- *Metallick Remedies.* ing, do's not always Succeed. Mercury being in the

Blood rarifies it, the Head and Throat Swell, and a great deal of foetid and clammy Spittle is voided by the Mouth for twenty or thirty Days; this Symptom do's equally pursue both Healthy and Pocky Persons; and can be attributed to nothing but an Essential Sulphur contain'd in the Mercury, and the Rarefaction that the little Balls of that Mineral cause, by intruding themselves between the Fibres of the Blood. If the Venereal Acids, are gross and bulky, 'tis true they'll associat themselves with the Mercury or Spittle, and so are carried off in Fluxings. But sometimes when the Vessels are much emptied; tho' the matter which feeds the push'es strikes in, and many other accidents may disappear; yet when the Vessels are filled again, they'll show themselves a fresh, because the Acid and Saline parts were not suitable companions for the white part of the Blood, so that in this case fluxing do's not cure. Moreover when the Acids that cause the Pox are subtil and joyn'd to rosinous parts, that is some earthy Sulphurs, they cannot penetrat or fasten upon the pores of the crude Mercury, as being not sufficiently opened; neither can they joyn in with the Serosity of the Blood; so that the Serum being carried off, and the pocky Ferments it formerly deluted being now united, their Acrimony is hightned, and soon after the fluxing the Disease returns with more dreadful Symptoms than before: So that we cannot sufficiently blame those Surgeons whose Avarice is such, that for a Shanker, that is, a little hard inconsiderable push, will condemn a Patient to so tragical a Remedy, without adjusting it to his Constitution, or the Nature of the Disease.

I have known some flux'd for such little Accidents as these, who two Months after, have been cover'd all over with venereal Botches, siez'd with Pains in their Head and Joints, and not only the same Shankers return'd, but new ones starting up about the Fundament, and that after a Flux of thirty Days.

*The use of
Fluxing.*

However I own that fluxing do's often compass the Cure; but then the Pocks must be of a certain Character. In general we may say that there are some who

who can't be cur'd without this troublesome Remedy ; and many can't be cur'd by it. Every one can distinguish the different kinds of the Pox, by the different Accidents that attend them ; some whereof may be produc'd by fine and delicat parts, others only by the more Gross and Solid.

We shall yet more easily understand the difference, if we consider that the Pox caus'd by gross disengaged Acids must needs be attended by many considerable Symptoms in the Solid Parts ; and on the contrary Acids that are much embarras'd, manifest themselves but slowly. Now Hypochondryack and Scorbutick Persons who have many earthy Particles in their Blood, are more liable to this last sort of Acid than other Persons.

Since Fluxing is a Remedy so uncertain, and withall so dangerous, leaving frequently terrible Accidents behind it ; let's see what relief the Preparations of Mercury and Antimony can afford. To begin with Mercury.

Mercury is a Mineral Liquor capable of different Preparations, which tend to open its pores and fit it for receiving venereal Ferments. This point is best gain'd by calcining it by it self, thus. *Mercury.*

You must put two Ounces of refin'd Mercury in a very narrow mouth'd Phial. Let it stand forty Days in a Sand Bath with a small heat at first, afterward encreas'd : Thus you have a red Powder upon which you must pour Spirit of Wine, and having drawn it off, pour it back and distill again ; so shall you have a Powder to be us'd from four to six Grains ; It is somewhat Emetick, provokes sweat, fraughts it self with venereal Ferments, more than all the other Preparations of Mercury, as being altogether free from foreign Acids : it is also a Remedy for Fevers, as well by its Emetic as Diaphoretic Vertue. *Calcin'd.*

Mr. Boyl prepares this Powder in a short time, by distilling the Mercury in a Retort with a Reverberatory Heat ; for after a few Hours there appears a red Powder upon the sides of the Vessel of the same Nature with the former.

You may hasten the Calcination of the Mercury, by amalgamating therewith an eight part of Gold or Silver, without diminishing its Vertue.

It is somewhat unaccountable how Mercury calcines by its self. *Tachenius* ascribes it to the External and Acid Sulphur of Mercury; forasmuch, as Mercury reviv'd from perfect Metals, will not Calcine by it self, having lost its malignant Sulphur, and therefore, says the Author, it will neither Vomit nor Flux. Tho' at the same time, continues *Tachenius*; 'tis the true Specifick for the Pox, especially if we turn it into a Cinnabar, by uniting it with a perfect Sulphur.

For my part, I am of Opinion, the Fire agitating the Mercury, changes the Figure of its grosser Parts, by separating these finer Particles of which they are Compos'd; or by joining to them the Volatil Sulphurs of the Wood or Oyl that were us'd to heat the Sand wherein the Vessel was set: And tho' the Acid Sulphur were the cause of the Calcination of the Mercury, and the Vomiting that it excites, yet I don't see why with this Author we should neglect it.

Moreover, I see no Reason why we may not separate the common Mercury from this pretended Malignant Sulphur: We may mix it with Metals, and recover the Mercury by a Retort. *Tachenius* acknowledges that it is then divested of its External Sulphur, but that it soon frames to it self a new one, wherein I believe no Man will agree with him. In fine, we use reviv'd Mercury, because it is undoubtedly more pure than ordinary.

*Cinnabar of
Antimony.*

We may also recover the Mercury from Corrosive Sublimat, and at the same time mix it with the Sulphur of Antimony; by distilling in a Retort Antimony mix'd with Corrosive Sublimat: If you desire much Cinnabar, you must give a strong heat at first, and afterwards lessen it. 'Tis probable the Mercury of this Cinnabar is depriv'd of its External Sulphur, because it will neither cause Fluxing nor Vomiting: And this Preparation ought to be own'd by *Vanbelmont* and *Tachenius*, for a Remedy not only in the Pox and Epilepsy, but also in Fevers, since it Operats only by
Sweat,

Sweat, tho' it be given to twenty Grains : That being the Character these Authors give of a good Remedy drawn from Mercury or Antimony.

Nevertheless, this is not altogether so good a Remedy for the Pox, as the Calcination of Mercury ; seeing the Effects are not so sensible, unless it is us'd for a much longer time.

If you would have a *Panacea* from Mercury, you must mix two parts of the *Mercurius Vita*, and one part of Mercury reviv'd from Sublimat Corrosive, in making the Butter of Antimony; this mixture you must Sublime thrice : And then it Purges, being given from three Grains to Six. It will be convenient to burn Spirit of Juniper upon the *Mercurius Vita* to correct it before you use it. This Preparation, given in a great Dose, sometimes provokes Vomiting ; and is not so fit to consume the Pocky Ferments, as the two preceding ; because the Mercury and the Sulphur of Antimony therein are yet charg'd with some strange Acids.

Mercurius dulcis is made, by thrice subliming a Pound of Sublimat Corrosive mix'd with three Quaterns of Crude Mercury, till the Mercury disappears : But Note, that at each Sublimation you must throw away the gray and yellow Parts that appear above and below. If you repeat the Sublimations ten or twelve times, and having beaten the Powder, pour on it Spirit of Wine ; after you have drawn off the Spirit, you have a *Panacea* which Operats neither by Purging nor Vomit, but will Flux if us'd without Purgatives. *Mercurius dulcis* kills Worms, and is good in all Venereal Distempers. The Dose is from eight to twenty Grains in some Conserve or Eleatuary, The *Panacea* is given in a greater Dose, and more frequently to excite a Flux, which it do's much more gently than either Frictions, or the white Precipitate.

To make the Corrosive Sublimat, you must exactly mix purify'd Mercury, Calcin'd Vitriol, common Salt decrepitated, of each a Pound, with half a Pound of Nitre, and Sublime the Mixture. This Composition

tion is not given inwardly, unless it be sweetn'd, as in *Mercurius dulcis*.

*A Mercury
of a Violet
Colour.*

You may make another Panacea of Mercury thus, mix carefully one Ounce of Mercury, and twice as much yellow Brimstone, with an Ounce and a half of Sal Ammoniack; Sublime them, and after add what is Sublim'd to the matter remaining at bottom; Sublime again, encrease the Fire, &c. These Flowers procure Sweat, given from half a Scruple to half a Dram. Some affirm that what is at bottom is a fix'd Mercury, but I believe there is little Mercury there, it being almost all carried up in Subliming.

Precipitats.

If upon a Solution of Mercury in Spirit of Nitre, you pour Salt Water, a white Powder will fall to bottom, which you must wash and dry: If upon the same Solution, or that of Sublimat Corrosive you pour Volatil Spirit of Sal Ammoniac, you shall have another white Precipitate: But if you pour Urine upon them, the Precipitate will be of a Rose Colour. These Powders procure Vomiting, and sometimes Fluxing. Dose, the first to five or six grains in some Conserve; the latter to ten. They can have but little Power against Venereal Ferments, being too much laden with Acids.

*Red Preci-
pitat.*

The common red Precipitat is made with a Solution of Mercury, in an equal quantity of Spirit of Nitre, you must Evaporate the moisture in a Sand Bath, and after encrease the Fire till the Powder becomes Red. It is of little Vertue inwardly, because it is too much charg'd with Acids, but may be us'd outwardly with success in Shankers, Ulcers, &c.

*Yellow Pre-
cipitat.*

Yellow Precipitat or Mineral Turbith is made thus; dissolve some Mercury in four times as much Oyl of Vitriol, in a Sand-heat draw off all the Oyl; break the Retort, and dissolve what remains in lukewarm Water: Thus the matter is chang'd into a yellow Powder, which you must wash and dry. It Purges violently upwards and downwards; but is too much ty'd up by the Acid of the Vitriol, to have any Effect in Venereal Diseases. Dose, from two to six Grains in some Conserve.

Mix

Mix a Solution of four Ounces of Mercury in as much Spirit of Nitre, with another Solution of an Ounce of Copper in an Ounce and a half of the same Spirit; Evaporat the Moisture, Calcine the Mass, and dissolve it in distill'd Vinegar, pour out the Solution by calcining the Vessel, and after Evaporat it: So you have a green Precipitat much clogg'd with Acids, which yet because of the Stiptick Parts of the Copper may be useful to stop Gonorrhæas. It provokes Vomiting; and is given from two Grains to six.

Green Precipitat.

All these Preparations of Mercury ought to be given either in Conserves or Pills. For in Potions, they either adhere to, and spoil the Teeth, or their Acids in which most of their Vertue consists are wash'd away by the Liquor.

The solar precipitat of Mercury is made by mixing a Solution of half an Ounce of Regulus of Antimony, and as much Gold, in *Aqua regia*, with half an Ounce of Mercury dissolv'd in Spirit of Niter; you must evaporat the Mixture, calcine the remaining Mass, then beat it and distill upon it Spirit of Wine six times. This Powder is given to five Grains, it operates by Sweat and Urine, and gives Relief in Quartan Fevers, Pox, and Dropsy.

Golden Precipitat.

Many have doubted if a Liquid Mercury might be drawn from perfect Metals. *Tachenius* says he has done it by a very long Preparation with Salt of Tartar; and *Raymond Lully* pretends to do it, with a Calx of Silver, and Oyl of Tartar. However, I see no advantage would accrew from this Mercury, sufficient to compensat the Trouble in getting it; and that which may be reviv'd, after mixing it with some Metal, or coagulating it with an Acid, is undoubtedly sufficiently purified for Medicinal use.

Mercury Regenerate.

Antimony is a good Remedy in venereal Maladies. But I don't altogether believe, with Mr. *Charas*, that it contains a Mercury which may be retriev'd by Chymistry; its Vertue may lye in the Diaphoretic and Metallick Parts that insinuat themselves into the Mass of Blood, and imbibe its Ferments; upon which account

Antimony.

we

we so much esteem Mineral Bezoar, Poterius his Anti-hectick, Diaphoretick Antimony, Cinnabar of Antimony, and that Niter which may be recover'd from the Lotions of Crocus Metallorum: But having already describ'd these Preparations, I shall only here add some Sudorifick Tinctures of Antimony.

A Tincture.

Calcine the Preparation call'd Liver of Antimony for twelve Hours, then set it in a Cellar to dissolve into a Liquor, upon which pour Spirit of Wine, and when it is sufficiently Tinctur'd pour it off by Inclination. It Purges, and provokes sweat, given from six to twelve Drops in some Liquor. You may also draw a like Tincture by Spirit of Wine from Diaphoretick Antimony, which operats only by sweat. It is very wonderful, that Antimony, which being crude is only a gentle Sudorifick, yet when opened with an equal quantity of Salt-petre, becomes a violent Emetick; and joyn'd to a double quantity is only Sudorifick: And that both Acid and fix'd Salts destroy its Emetick Force. 'Tis easy to say in general, that this proceeds from the different ranging of its parts; but that is to say nothing. It can't be said that its Emetick Vertue does altogether depend, either upon its Acid, or its Sulphur; for Acids often extinguish its Emetick Power; and its Sulphur is not always Emetic: for after you have recover'd the Mercury by the Salt of Tartar from Cinnabar of Antimony, if you filtrat the Lye made of the remaining Mass, and precipitat it with Vinegar, you shall have a Sulphur of Antimony, that operats only by sweat, from six to eighteen Grains, in some Liquor or Conserve. You may also with Spirit of Wine extract a Tincture from Antimony calcin'd with Salt of Tartar, which will only be Sudorifick, and something purgative, from four to fifteen Grains: the Antimony is calcin'd, by throwing three Ounces thereof in Powder, upon twice as much melted Tartar, and leaving the mixture upon the fire till the Operation is perform'd. You may also draw a Tincture from Antimony calcin'd by it self, or mortifi'd by some Acid Spirit, either with Spirit of Wine, or with that of Turpentine, or both mix'd together. But howsoever you prepare

Sulphur of Antimony.

prepare these Tinctures, they operat almost all as Diaphoreticks, and are able to purify the Mass of Blood, to defeat venereal and Scorbutick Acidities, and to resist the Malignity of spotted or pestilential Fevers.

The LIST of Anti-Venereal Remedies.

Roots of Burdock,

China Roots,

Guajacum,

Sarsaparilla,

Sassafras,

Powder of Vipers,

Calx of Mercury, or Mercury Precipitat by it self, from four to six Grains.

Cinnabar of Antimony, from four to twenty Grains.

Mercurius dulcis, to twenty Grains.

Panacea, to forty Grains.

White Precipitat, from five to six Grains.

Rose-colour'd Precipitat, from four to six Grains.

Green Precipitat, from three to six Grains.

Red Precipitat, externally in Pomatums, one Dram to an Ounce of the Ointment.

Yellow Precipitat, from two Grains to five.

Diaphoretic Antimony,

Mineral Bezoar,

Poterius's Anti-Hellie,

Tincture of Antimony, from six to fifteen Drops.

} See Diaphoreticks.

} From four grains to a scruple.

FORMS of Receipts.

PILLS of crude Mercury.

Take Mercury prepar'd with Juice of Lemons, and Venice Turpentine, of each half an Ounce; of Scammony and Rhubarb in Powder, of each three Drams; make a Mass of Pills: Dose from one to two Scruples, or one Dram. Tho' the Mercury is not enough open'd by the Juice of

Of Anti-Venereal Medicines.

of Lemons, to imbibe Acids that are very volatil; yet considering the Impulse of the Purgative, it may come to drink 'em up. We must never give crude Mercury inwardly as an Alterative, without mixing it with Purgatives; 'Tis true, its Preparations may be given without 'em; but not long continued without intermixing some Purgatives, else they'll certainly salivat.

A Cinnabar Antimonial and Mercurial.

Take half an Ounce of Powder of Mercury precipitated by it self, and corrected with Spirit of Wine; and an Ounce of Sulphur drawn from Cinnabar of Antimony; mix them well, and sublime the Mixture. Thus ye have a Cinnabar more perfect than that of Antimony, which will be sudorific, and may be given to twenty Grains in all Venereal Distempers.

A Fumigation for the Pustles of the Anus.

Take half an Ounce of crude Antimony in Powder, two Drams of Cinnabar made with Mercury and Brimstone Sublim'd together, Mastick and Male-Incense, of each a Dram; and make little Balls with liquid Storax. The Smoke of one or two of them laid on burning Coals may be receiv'd in a close Stool.

The Parts of the Antimony and Mercury being elevated, and much mov'd by the Fire, insinuate themselves into the little Shankers and Pustles of the Fundament, and defeat the Venoms, being assisted by the Balsamic Parts of the Incense, Storax and Mastick. This Smoke receiv'd at the Mouth would cause a Salivation.

A Water for Venereal Shankers.

Dissolve half an Ounce of Mercury in an Ounce of Spirit of Nitre, and having evaporated some of the Moisture, pour eight Ounces of common Water upon the Remainder; and let it digest for twenty four Hours. Use this Water outwardly,

When

Of Remedies for the Scurvy.

401

When Mercury is externally us'd, it ought to be well charg'd with Acids; and indeed it often happens that Acids by themselves externally us'd give no small Relief in some Symptoms of the Venereal Distemper; but we shall have Occasion to explain this more at length by and by.

C H A P. XVIII.

Of Remedies for the Scurvy.

THE Scurvy, a Disease not unlike the Pox in its Cause and Symptoms, is occasion'd by an Acid not altogether so corrolive as that of the Pox, because incumbred with earthy Sulphurs; but more obstinat and stubborn and attended sometimes with a Stench, which is not ordinarily met with in the Pox. *The Nature of the Scurvy.*

The signs of this Distemper are, Ulcers of the Mouth, weariness of the Legs, dark Spots, difficulty of Breathing, and wandring Pains over all the Body, which are oftentimes caus'd by Wind proceeding from the gross Sulphurs. *Its Signs.*

Volatil Alcalies give sometimes great Relief, yet least the sudden Motions which they occasion in the Humors, should cause Inflammations and Increase of Pain, it is better, especially at first, to use fix'd Alkalies, such as the Tincture of Flint-stones, Diaphoretick Antimony, Tincture of Antimony, Mars Diaphoretick, Poterius's Antihectick, Crocus of Steel its Tincture, prepar'd Coral, &c.

Some Physicians forbid the use of Mecurial Preparations, even when this Distemper is complicated; partly lest the Patient should be stifled by the Flux of Humors towards the Mouth, already exulcerated; and partly lest the Acidities, left in full force in the subtil part of the Blood rarified by the Mercury and rob'd of its Watery Part, should carry the Disease to a dangerous height: but I am not of their Opinion; for mercurial Remedies may do very well, providing we don't determine *The use of Mercury.*

Of Remedies for the Scurvy.

termine the course of the Humors to the Mouth, and withal use Alkalies strong enough to dissolve the gross Scorbutick Sulphurs.

A caution.

In the next Place we may use all volatil Spirits, that do not extreemly agitate the Blood, but are sharp enough to dissolve gross Sulphurs; as the Spirit and volatil Salt of Amber, the Water and Spirit of Scurvy-grass, Brook-lime, Mustard, Horse-radish, the Aromatick Oylly Spirit and Salt, Spirit of Gum Ammoniac, Essence and Spirit of Earth-worms: But we must be careful not to use them too much, or too frequently, lest we cause Inflammations, (especially about the Ulcers of the Mouth) increase of Pains, difficulty of breathing, &c.

*Difference of
Scorbutick
Remedies.*

Remedies for the Scurvy in general may be reduc'd to two Classes, both which seem to have a Sal Ammoniac for their Head. In the first the Acid prevails over the sharp Volatils, as in Sorrel, Water-cresses, Agrimony, Wild-Tansy, Strawberry-leaves, &c.

In the second, the sharp volatil Salts do much surpass the Acids, as in Horse-radish, biting Arsmart, Wake-Robin, Dittander, &c.

And in fine, we may add a third Sort, where the Acids are allay'd by sharp Salts, and yet more by great Plenty of Oyl; as in Sage, Mustard, and above all in Juniper.

I shall not discourse particularly of all these Medicines, since many of 'em are already dispatch'd, and the others will come in my way hereafter.

A LIST of Remedies for the Scurvy.

Horfe-Radish,	}	By Handfuls in Decoctions.
Water-cresses.		
Scurvy-grafs.		
Arsmart.		
Marsh Patience.		
Money-wort,		
Agrimony,		
Brook-lime,		
Sage,		
Silver-weed,		
Mustard,	}	To a Dram.
Strawberry-Plant,		
Amber,		
Coral,		
Sea'd Earth,		
Bole-Armoniac,	}	To two Scruples.
Roots of Cuckow-pint, in Powder,		
Dittander, in Powder.		
Juice of Smallage.	}	By Spoonfuls.
Of Scurvy-grafs,		
Of Water-Parfnip,		

Chymical Remedies.

Tincture of Flint-stones, from six drops to thirty.
 Diaphoretick Antimony, from six to twenty Grains.
 Diaphoretick Steel, from six to twenty Grains.
 Mineral Bezoar, from six to twenty Grains.
 Tincture of Antimony, from six to fifteen drops.
 Aperitive Crocus of Mars, from six grains to two Scruples.
 Tartar Martial soluble, from half a Scruple to half a Dram.
 Volatil Salt of Amber, from four to six Grains.
 Distill'd Water of Cresses, Brook-lime, Scurvy-grafs, from one to six Ounces.

Spirits

Of the Remedies for the Scurvy.

Spirits of Cresses and Scurvy-grass, from twelve drops to two drams.

Sage-water, to six Ounces.

Sal-ammoniac, to thirty Grains.

FORMS of Receipts.

A Ptisane for the Scurvey.

Take an handful of Scurvy-grass, Cresses and Strawberry-leaves, of each two handfuls ; boil them in five Quarts of Water, strain the Decoction, and add two drams of soluble Calybeat Tartar.

A Syrup for the Scurvy.

Take Juice of Scurvy-grass, and Cresses, of each a Pound ; Juice of Water Parsnip half a Pound ; fix'd Salt of Tartar, half an Ounce, with a Pound and a half of Sugar ; boil all to the Consistence of a Syrup ; a Spoonful of which may be taken mix'd with Water, or a Sage Ptisane.

Spirit of Cresses.

The Spirit of Cresses, Scurvy-grass, &c. are thus made : Bruise any of these Plants, and sprinkle 'em with their own Juice ; add Yest of Beer to make it ferment ; set in the Sun, or a warm place, four days, till the Fermentation be over : Then put it into a Body fitted to a Head and Recipient, and distill in the usual manner : Pour this Water again into a long neck'd Matras, and draw off the half, which is the Spirit, and what remains is the Water. Dose of the Spirit from one Dram to two ; of the Water to five or six Ounces. They may be us'd in many other Distempers to purify the Blood and open Obstructions, as in the Jaundice, Rheumatisms, the Evil, &c.

The Volatil Spirits of Plants cannot easily be drawn from them, therefore is it that we endeavour by Fermentation to set 'em at Liberty.

C H A P. XIX.

Of Remedies for Hypocondriack Distempers.

Hypocondriack Melancholy, as well as the Scurvy, proceeds from an Acid in the Blood extremely fix'd, and embarrass'd with plenty of gross Sulphurs: 'Tis harder to be Cur'd than the Scurvy, because the Salts and Sulphurs that cause it are more encumber'd with Earthy parts.

Hypocondriack Melancholy.

We are wont to give violent Purgatives, and some times Emeticks to precipitate the Acids, and at the same time exhibit preparations of Iron, in order to joyn its fix'd Alcalies with the gross Acids in the Body. Thus the best Remedies that have been found out, are Salt of Iron, and the Opening Extract of Steel, Opening Crocus of Steel, Mars Diaphoretick, Tincture of Mars, fix'd Salt-peter, Salt of Tartar, soluble Martial Tartar, Tincture of Antimony, &c. Some Authors alledg Iron does not pass into the Blood; But I cannot joyn issue with 'em, for I have often seen the Urin of Hypocondriack persons black after the Use of Steel Remedies. Medicines charg'd with Volatil parts, such as Oyl of Cinnamon, Essence of Ambergris, Volatil spirit of Sal-Ammoniac, &c. seldom do much good; for their parts being not solid enough to break the points of the Acids which give rise to the Disease, they only raise slight Fermentations that inflame the Symptoms. Indeed Oily things joyn'd with Volatils may give great Relief; such are the Tinctures of Saffron, of Castor, the Volatil Oily Spirit, &c. All remedies recommended for the Scurvy are given here; and indeed these two Distempers seem to differ only accidentally; in the one the Teeth and Gums; and in the other the Nerves and Membrans are chiefly affected: So the Remedies for the former ought to be joyn'd to Vulneraries, and those for the latter to Cephalicks:

Use of Steel.

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A List of Anti-Hypochondriacal Medicines.

THe Juice of Fumitory, Hops, Bugloss, Borrage, and Cicory; either by themselves Clarified or mix'd with Whey.

Crabs Eyes, prepar'd Amber, Coral in Powder, Foliat Tartar, Foliat Nitre and Diaphoretick Antimony; to a Grain in Potions or Opiats.

The Volatil oyl Sale to 20 Grains, Tincture of Antimony to 15 Drops, Oyl of Cinnamon and Cloves to 4 Drops, Oyl of Amber to 12 Drops.

Soluble Martial Tartar, Tincture of Mars, Aperitive Crocus of Mars, Opening Extract of Mars; see Aperitives.

Brook-lime, Scurvy-grass, Arsmart, Mustard, Sage; their Waters or Decoctions.

Forms of Receipts.

A Tincture.

Take two Drams of Castor, one of Saffron, half a Dram of Opium, a Dram and a half of Foliat Tartar; pour on them half an Ounce of Volatil spirit of Sal-Ammoniac, let them stand 4. Hours; then add 2 Ounces of spirit of Wine, and let them stand 24. Hours; then pour off the Tincture by inclination, to be given to 15 Drops in the Waters of Sage, Lilly-convally, &c.

A Purging Electuary.

Take 2 Drams of Martial Tartar, Scamony and Mercurius-dulcis, one Dram of Coloquintida pulveriz'd and prepar'd, 12 Grains of Opium; make them up into little Pills with fresh Butter for 12 doses.

C H A P. XX.

Of Specificks in General.

WE call that a Specifick Medicine, whose operation is in a peculiar manner fitted to one Distemper or one part. Such Remedies were formerly very much talk'd of by those who allow'd occult Qualities: For if a Medicine was seen to operate with success on any part, it was said to do it by a Sympathy or Agreeableness it had therewith: But some Moderns having consider'd how Food and Medicins are digested in the Body, have maintain'd, with some probability, that they have no influence upon the parts but by the mediation of the Blood. But this advance is in some cases faulty; for 'tis certain that some Medicines have a particular Disposition and Order of Parts which renders them more fit to insinuate into the Pores, for example, of the Liver, than of the Reins; or to ferment with the Urin than with the Bile. Thus if we take Cantharides, there follows a Violent Sharpness of Urin without tainting the Excrements of the Belly, Spittle, &c. and the Urin will smell of Violets upon taking of Turpentine, while the Stools and Sweat do not. Indeed I cannot deny but the Antients have gone too far, in attributing particular Vertues to some Medicines that operate only on the whole Mass of Blood. So most of those given in for the Head, and called Cephalicks, for the Breast Thorachicks and Bechiques, for the Heart Cordials, for the Liver Hepaticks, for the Spleen Splenetick, for the Womb Hystericks, &c. The most part of these, I say, do only influence the Blood: Neither can we believe what they say of their Vertues, unless the Physician can give them a Commission to lodge in one part without disturbing another.

Doubtless there are Medicines which Externally applied are Specificks for certain parts ; to some Remedies are appropriat to the Eyes, and have no Effect on other parts of the Body ; and there may also be Stomachicks for a like Reason. There are likewise some Epithems and Fomentations for the Region of the Liver and Spleen, whose active particles may penetrate and act Specifically on these parts. But for Medicines taken in at the Mouth most of 'em operate upon the Blood, and by rectifying the disorders thereof, do easily restore the Bowels.

This thought is so reasonable that every one must agree to it ; at least he must be mightily prepossess'd in favour of Antiquity, who will maintain that Hepaticks, Spleneticks, &c. act immediately upon these parts, without affecting the Blood. But this is not the only Question ; there's yet another behind, *viz.* Whether there are any Specifical Remedies for Diseases, as Distinct from the parts ? For my part I own I know none infallible, for any Distempers whatsoever. What ever Quacks may boast, I never saw any great feats done by their Medicines.

However, there are some Remedies more particularly suited, for Instance, to the Epilepsy, Apoplexy, Palsy, Worms, Gravel, Fevers, Hysterick Distempers, Swoonings, &c. than to other Diseases.

We may easily upon a superficial view perceive, that all Medicines have differing particles, and operate differently. Acids have a general vertue to ferment with Alcalies, and yet they have particular qualities whereby they differ among themselves : Spirit of Nitre dissolves the Stone, other Spirits cannot ; the Acid of Brimstone do's not congeal the Blood, tho other Acids do ; and that particular Disposition of particles, may appropriate 'em to particular Diseases and parts. Experience and Reason will vouch for thus much, and I maintain no more. I shall only tell you by the bye, that Mr. Boyle has written a whole Treatise, Of the Agreeableness of Specifick Remedies with the Corpuscular Philosophy.

I shall take occasion to bring in the Specifics for Diseases, when I speak of those for the parts, since the one was not found out without the other.

C H A P. XXI.

Of Cephalicks, and Remedies for the Epilepsy, Apoplexy, and Palsy.

Cephalicks or Medicines for the Head differ among themselves as much as the Distempers in which they are given. For Headaches occasion'd by gross Acids that thicken the Blood, We prescribe inwardly and outwardly, Vervain, Betony, Rose-root, Roses, Zedoary, Amber, the Decoction of Coffee, Tea, Elder-flowers, Sage, Camphir, and an infinity of others, as Sudorifick Decoctions, &c. But if the pain proceeds from the Over-rapid Motion of the Humors caused either by Sharp salts or Volatil Acids: In this Case we recommend Violets, Water-lillies, Sorrel, Henbane, Poppy, Opium, Night-shade, and Acid Spirits: For such temperate Ingredients as Water-lillies, Violets, Henbane, &c. sweeten the Volatil Acids; and such as abound in Acids, Correct the sharp Salts.

Difference of Cephalicks.

When the Blood is too thick and Circulates heavily in the Vessels of the Meninges or Pericranium, it distends their Fibres and so Causes pain; in this Case we order such things as quicken the Motion of the Blood, and Dissolve congealed substances. Such are Decoctions of China and Guaiacum, preparations from Sage, Marjoram, Rosemary, Betony, Stoechas, Lavender, Saffron, and other Aromaticks, as also Rhodium-roots and Vervain, both outwardly and inwardly. These Medicines contain a Sulphur that is easily Volatiliz'd, and fit to clog the Acidities which cause the Disease.

Causes of the Head-ach.

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A Caution.

Water-lillies, Lettuce, Henbane, Night-shade, and Opium, having gross Sulphurs, apt to joyn in with the Volatil parts of the Blood, and hinder their action, suppress the rarefaction of the Blood in the Vessels of the Head, and put a stop to the tearing pains of the Fibres of the Membrans. 'Tis thus that Narcoticks operate, in easing pains of all sorts: But when we give them inwardly we must be careful to adjust the dose; for if it is too small, the pain will remain; and if too great, a fatal Sleep will ensue. Narcoticks must not be applied to the Structures, lest they bring on Sleepy Distempers: Nor used in the time of a Crisis, lest they put a stop to it by hindring the Motion of the Spirits which are Natures Instruments in her Operations. Medicines that by their Acidity check the Rarefaction of the Blood, are not so apt to cause Disorders; yet 'tis always good to be cautious.

Other Causes.

Headaches may also proceed from Venereal or Scorbutick Ferments mix'd with the Blood, which ought to be destroy'd by Remedies appropriate to these Distempers. Thus, tho Milk is apt to increase the Headach, being easily congeal'd by Acids, or rarified by Volatils; yet in Scorbutick pains of the Head it gives great relief, because of its suitableness in that Disease.

We have often observ'd Headachs occasion'd by Mercury penetrating to the Head and there rarifying the Blood: In this case some order a peece of Gold to be held in the Mouth. In the mean time we may exhibit whatever drives Mercury out of the Body, as *Aurum Fulminans*, Volatil Spirit of Sal-Ammoniac, &c.

External Remedies.

Sometimes the Headach proceeds from an Acid Lymph on the outside of the Pericranium, and then Blisters are of excellent use: But if it be occasion'd by some foreign Body under the Skull, or inclos'd in a swelling upon the Pericranium; we must in the first case use the Trepan, and in the latter the Lancing or Causticks.

But

But whatever be the Cause of Headachs, if the Stomach and Guts are stuffed, a Vomit must be given, which often by it self performs the Cure; enabling the Stomach to sweeten the Mass of Blood by imparting to it a Chile, pure, sincere and void of strange Ferments.

I don't disapprove of Blood-letting in the Forehead, Jugular Veins, or Artery of the Temples on some occasions; but because they're Foreign to our present business, I pass them over.

The Epilepsy is a Disease, wherein the Patient from time to time falls down depriv'd of Sense and Judgment, with Convulsive and Violent agitations, and foaming at the Mouth: It, often happens that Urin, Seed, and the Excrements of the Belly come from the Diseased in the time of the Fit, which is usher'd in sometimes by a Colick, pain of the Foot, or other Member. Epileptick Persons are not always void of sense; for some in the Fit can Laugh, and others make motions and Gestures almost unaccountable; so that a spectator would think them possess'd, did not the Physician undeceive 'em.

Epilepsy.

The morion of the Muscles being perform'd by the Animal Spirits, we cannot doubt that the Epilepsy, as well as other Convulsions of the Body, is caus'd by the Irregular and impetuous motion of the same Spirits in the Fibres of the Muscles.

Its Cause.

When the Fibres of a Muscle are prick'd, and have their contexture disorder'd by any thing contain'd in them, the Spirits are determin'd to move thither in greater quantities, and in a more violent manner than before, because the Spring or Tone of the part which formerly stood firm, ceases to resist the Course of the Liquor. A disorderly motion in some Fibres of the Nerves, may occasion the same in others, especially such as come from the same Trunc; and for so much as the Nerves of the Mesentery and Intestines communicate almost with all the others of the Body, 'tis no wonder if Worms in the Guts cause Convulsions in Children, the Fibres of whose Nerves are easily mov'd; and for the same Reason

pains of the Stomach, the Colick, or pains in any other part of the Body, may be the Beginning and Cause of the Epilepsy.

The Irregular motions of the Spirits may be occasion'd also by Fear, Anger and other Violent Passions, which may hinder their motion in some Nerves and promote it in others, which is enough to cause an Epilepsy, or Convulsions. This may also happen on a sudden by an Aposthem in the Head. 'Tis this disorderly motion of the Spirits that causes the loss of Sense, extraordinary motions of the Body, without the concurrence of the Will, Contractions and Distortions of the Muscles of the Abdomen, Breast and Face, &c. and thus we may account for all the strange Phenomena of this Disease.

Objection. Some may say, when the Epilepsy begins by a pain in some part, a Ligature upon the part will prevent the Fit; which seems to prove that some Vapour passes from the part to the Brain. I answer, the Ligature hindring partly the Sense of the Member, and the irregular motions of the Fibres and Spirits, does thereby lessen the Irritation, and by consequence the Cause of the Convulsion; and moreover stops the disorderly motion of the Spirits towards the part. And if it be true that a Caustick apply'd upon the part, Cures the Epilepsy; 'tis only by destroying or bringing out these Particles, that by Fermenting caus'd the Irritation. 'Tis for this Reason we use actual or potential Cauterics in all Distempers where we suspect Ferments, as in a Rotteness of Bones or other cases.

Observation. It frequently happens, that the Irregularity of the Spirits causes a disorderly Concoction of the Chyle, and distribution of the Humours; from whence the Stomach becomes stuffed with foreign Humours, and the Blood more clammy than usual. The Stomach being cramm'd with sharp Humours, may either by it self occasion an Epilepsy by Irritation, or by reason of the Clamminess of the Blood some passages of the Brain may be closed up, and so interrupt the Course of the Spirits. This is often
seen

General Remedies.

seen in Children, where the Milk curdling causes Convulsions, that are not easily cur'd by Specificks, unless some little Pill of Aloes, or a slight Emetick be first given : We ought also to begin the Cure with Emeticks in all Persons Adult where we perceive a Disposition to Vomit ; and afterwards go on with Purgatives, especially such as dissolve Viscous Blood, as *Mercurius Dulcis*, its Panacea, Extract of Hellebor, Scammony, &c. And because the Disorder of the Spirits sometimes proceeds from a redundancy of Blood distending the Vessels of the Brain ; letting of Blood, and opening of the Piles are in that case very serviceable. For the Toughness of the Blood we exhibit Sudorifick Decoctions ; and to check the Irregular motion of the Spirits, such things may be given as are apt to fetter and clog them ; as *Hartman's* Pills of Laudanum with Oyl of Camphir, or *Ludovic's* Cinnabar of Antimony with Opium ; *Fonseca* orders to anoint the Nostrils, Temples, and Wrists with Oyl of Boxwood, as a great Narcotick, which with some Volatil parts has a Sulphur that quiets the Irritation that gave rise to the Distemper. For the same Reason the Oyl of Hasel-tree is much commended both inwardly and outwardly. We may also use Misseltoe of Hasel, seed of the male Piony, Lilly convally, Lime-tree flowers, Tobacco, Saffron, Camphir, Caster, Spirit and Powder of a human Secondine, St. John's wort, Wall-Rue, Ladies Bedstraw, Juice of Chervil, Powder of Swallows, stones of a Horse, Shavings of a Man's Scull, its Moss, Harts-horn, Elks-claws, Peacocks-dung pulveriz'd, the Livers of Eels and Frogs, &c. Tho these are not all Narcoticks, yet they contain Volatil parts which carry them to the Head, and also Sulphurs that stay the impetuous motion of the Spirits, and soften the irritating Particles. We may add the Water of Blackcherries, Rosemary-flowers, Powder of Amber, Cinnabar of Antimony, spirit of Ants, Extract of Juniper, Sage, Lavender, the Anodine Narcotick spirit of Vitriol, Water of Swallows, &c.

In

*In time of
the Fit.*

In the Fit, the more Volatil and Spirituous Remedies are best; such as Volatil spirit of Sal-Ammoniac, the Volatil oylly Spirit, spirit of Harts-horn, Spirit of a Secondin, &c. the black Oyl of Amber outwardly, and its clear Oyl inwardly: But when the Fit is over those of a less Volatil nature may suffice.

*External
Remedies.*

I shall only add, that Causticks, Blisters and opening of the Skull, have often cur'd this Malady, by letting out the offensive matter from the Nerves. As for Amulets I account them frivolous, and shall not trouble my self with them.

Apoplexy.

An Apoplexy is a Cessation of sense and motion over all the Body, caused by an Obstruction of the Nerves of the Brain, those of the Cerebellum being free, so that the Pulse is not altered.

Palsy.

The Palsy is an Obstruction of some of the Nerves of the Brain, or of the Pith of the Back-bone.

In these two Distempers we must always endeavour to move and Jog the Nerves, and to clear the first Passages, that Spirituous Remedies may the more easily penetrate. We must begin therefore with Emeticks, sharp Clysters, and violent Purgatives; we may also give sneezing Powders; and in a sanguin Apoplexy where the Redundancy of Blood swells the Vessels and presses the Nerves, we may draw out a great quantity of Blood, but never or seldom in the Palsy. Afterwards in either of these Maladies, we may successfully use either outwardly or inwardly, Sage, Rosemary, Marjoram, Bay-leaves, Hyssop, Germander, Ground pine, Lavender, Thyme, Spike, Stechas, Wild Marjoram, Pennyroyal, the four hot seeds greater and lesser, Extract of Juniper, Sudorifick Decoctions of Guaiacum, &c. both to prevent the Apoplexy and to Cure the Palsy. In the Fit of an Apoplexy you may give the Tincture of Castor, Spirit of Wine prepar'd with Camphir, Treacle Water, Cinnamon Water, the Volatil Spirits and Salts of Urin, of Sal-Ammoniac, of human Blood, of a Mans Skull, of Hart-horn, &c. The same things may be given in
the

the Palsy; but in a less dose. Outwardly you may use the Oyl of Earth-worms, Rock Oyl, &c. for the same Disease.

Among Cephalick Medicines we shall only particularly speak of Vervain, Roses, Tea, Coffee, and Rosemary; and among Epileptick Remedies, of the Lime-tree, St. Johns wort, Ladys bedstraw, Hafel-tree, Peacocks-dung, Amber and Camphir.

Vervain gives by Analysis some Acids, much Oyl, some Volatil Salts, and some fixed Salt and Earth: Thus we see its Juice and Extract is good against Fevers, only 'tis not much used, because we have those that are better: its Juice and Distill'd Water externally used are good for pains of the Head, either by themselves, or mixt with Powder of Rose-root: The Distill'd-water of this plant is given inwardly to prevent Abortion, as I have intimated elsewhere.

Vervain.

Sweet smelling Roses have a Sulphur very much exalted, so that 'tis hard to draw any Oyl from them; but by Fermentation they will yield an Odoriferous Spirit; their Distill'd water and Spirit whether inwardly or outwardly used, being intitled to a penetrating and opening quality, will cure some pains of the Head, whether inwardly or outwardly, tho' their smell will occasion others in some Persons: their Distill'd water, Spirit and Extract, may also be given for Intermitting and continual Fevers: the Conserve is much commended in the Phthisick, &c.

Roses.

Tea abounds in a very volatil Oyl, and some Salts of the same Nature, so that its Decoction is excellent in pains of the Head; if it be used very hot 'tis so much the more effectual, for then it will loosen these clammy humours that stick to the sides of the Ventricle, hinder the Concoction, and occasion a crude Chyle to be sent into the Blood, capable to continue the pains of the Head.

Tea.

Coffee operates much after the same manner, and tho' 'tis burnt before we make the Decoction, yet it carries into the Blood some Earth, Oyl and fixed Salts,

Coffee.

Sales, which for some time cause a Fermentation, and hinder Sleep.

Rosemary. Rosemary is made up of almost the same principles as Sage and Marjoram; perhaps it contains a little less Earth which makes it more prevalent in Rhumatick Distempers.

St. Johns wort. St. Johns-wort has some Acids, and very much Oyl almost like to that of Turpentine; wherefore both inwardly and outwardly it is one of the best Vulneraries: The Decoction or Powder of the flowers, is very much esteem'd in all Hysterick, Hypochondriack and Convulsive Distempers. So that this Plant is justly given in amongst Epileptick Remedies: It is also good against Madnes.

Lime-tree. The Lime-tree hath some Acids, much Oyl, and some Volatil Salt: 'Tis one of the most fam'd Remedies for the Epilepsy; you may use the Ardent Spirit, the Water and Extract of its flowers, or the flowers in substance.

Ladys Bed-straw. Ladys Bedstraw is a most excellent Remedy in the Epilepsy, whether you use it in Powder, to a dram, or in Decoction, allowing a handful of the Herb to a quart of Water.

Peacocks Dung. The Dung of a Peacock, as that of other Animals hath store of Volatil Oily Salts; wherefore 'tis a good Medicine in the Epilepsy; the white part of it Pulveriz'd may be given in some convenient liquor.

Hasel tree. The Wood, the Mistletoe, and the fruit of the Hasel-tree, are all used: The Wood distill'd in a Retort yields a Volatil Acid like that of Guaiacum, together with an Oyl: The Spirit may be given to Twenty drops in some liquor: The Oyl may be rectified upon some Earthy matter, and be given with success to Four or Five drops against the Epilepsy and Worms; it may be put into the Teeth to ease their aking. The Mistletoe is much commended for the Epilepsy, and by some prefer'd to that of the Oak. *Quercetan* commends the shells of the Nuts for the Plurisy, and others esteem them highly in the Bloody-flux, as well as the little skin that

that covers the Kernel, and many Authors recommend them for the Stone and Heat of Urin.

Camphir is a very Spirituous Rosin ; that which we use has been separated by sublimation from its Earthy parts : It contains a Volatil Salt so united to an ethereal Oyl that 'tis impossible to disjoin them : 'Tis an admirable Medicine against Malignant Fevers, either by it self, or mix'd with other Cordials ; 'tis given inwardly to fifteen or twenty Grains ; it may be dissolv'd by digestion with the Oyl of Citron-peel, to be used in Pettilential Diseases, or with Oyl of Amber for the Epilepsy, Vapours and Malignant Fevers. 'Tis in vain to distill these dissolutions, for the Camphir and the Oyl come over in substance. If you mix Camphir with other Epileptick Medicines, particularly with Cinnabar of Antimony and Opium, you have an excellent composition to prevent Epileptick Fits : If you dissolve it with Volatil spirit of Sal-Ammoniac, and spirit of Wine, 'tis admirable in the Fit : You may give it to a Dram in a Clister dissolv'd in Oyl of Juniper or Brandy, and it will provoke Sweat ; these Clisters are much esteem'd in malignant Fevers. One Scruple of Camphir, and half a Dram of Salt of Lead, dissolv'd in two Drams of the clear Oyl of Turpentine, is given to twenty drops in malignant Gonorrhæas. 'Tis much recommended against Madnes being mix'd with Musk and used inwardly or outwardly ; together with Musk you may add Opium, and with spirit of Wine extract a Tincture, wherewith you may rub the Nostrils and Temples, to procure Sleep. Camphir is used Externally mix'd with Water of Frogs-spawn, of Night-shade, or with Oyls, against Inflammations and Burnings ; and dissolv'd in spirit of Wine against pains of the Head, or to wash the Mouth with in the Tooth-ach, or to apply to Gangren'd parts. 'Tis also dissolv'd in Oyl of Almonds, and apply'd to rotten Teeth. Some dissolve it in spirit of Nitre, and it yields a caustick Oyl : But howsoever you dissolve it, whether with Acid spirits, burning spirits,

or

or Oyls, If you throw in common Water it will fall to bottom; so that 'tis only a apparent dissolution.

Amber.

Amber abounds in a Saline Volatil Salt, and Volatil Oyls: 'Tis a strong Oyl coagulated by the Sea Water; if Salt prevails it is white, but if Oyl it is Yellow, but may be whiten'd with Salt water. Its true preparation, as *Ludovic* says, is to be ground on a Porphyry. Tho it can scarce be alter'd by any dissolvent, it ceases not to be of great vertue; for in this 'tis like unto Iron and Camphir, which yet are admirable: you may make a Tincture of it in spirit of Wine, or you may add Oyl of Tartar, &c. All these preparations of Amber whether Internally or Externally used, are good against the Epilepsy, Hypochondriac Melancholly, Vapours, and Rhumarick Distempers, and also against the Stone and difficulty of Urin: The Troches or Powder of Amber may be used in a Vomiting of Blood, Pissing of Blood, and the Bloody-flux; dose half a Dram or two Scruples.

Amber when distill'd with a Retort will yield at first a Phlegm, next an Acid spirit, afterwards a clear Oyl, then an obscure one, and last of all a Volatil brinish Salt, sticking to the Neck of the Retort, that which remains at the bottom being a kind of Rosin; the Liquors may be separated by the funnel, and the Volatil Salt by sublimation. This Volatil Salt mixt with spirit of Hartshorn and its own spirit, and distill'd, affords a Remedy admirable in the Epilepsy, and Rhumarical Distempers; and so is the clear Oyl: The black Oyl is only used outwardly, you may rub the Head therewith in Rheums: If you would diminish its Rankness you may mix it with Camphir, and it will be so much the better. Some order Fumigations with Amber for these same Maladies, and for the Phthisick. Authors do much recommend the oyl of Amber inwardly in Hysteric Distempers, and to bring away the Afterbirth; for which purpose it may also be used Externally to anoint the Secret parts. By dissolving the Flowers of Brimstone

stone in this Oyl you may make a Balsam of Sulphur, which may be used to good purpose in Rheums, Phthifick, &c.

A List of Cephalick Remedies.

Betony, Sage, Marjoram, Lilly-convoally in Powder ; from half a Dram to a Dram and a half

Bays, Hyssop, Wild Marjoram, Germander, Ground Pine, Penny-royal in Decoctions; from half a handful to a handful.

Calamint, Vervain, Rose-wort; Outwardly.

Amber to a Dram, Saffron to half a Dram, Castor to two Scruples, Opium to a Grain, Water Lilly its Root in Ptisanes, Lettuce its Decoction.

Night-shade, House-leek, Externally.

Guaiacum, China, Sarzaparilla, Sassafras; In Decoctions.

Flowers of Rose-mary, of Stoechas, Bay-berries; from a Scruple to a Dram.

Chymical Medicines.

The Waters of Lilly-convoally, Betony, Calamint, Baum; from one Ounce to Four.

The Waters of Roses, Vervain, Outwardly and Inwardly.

Extract of Baum, from a Scruple to a Dram.

Volatil spirit of Sal-Ammoniac, Smell'd to, or taken Inwardly.

The Forms of Receipts.

A Powder for cold and dull pains of the Head, Numness, Palfies, &c.

Take of Sage, Marjoram, Germander of each a Dram, Flowers of Betony, Rose-mary and Stoechas of each a Dram, and make a Powder; of this take the weight of a Dram when you rise in the Morning in a glass of good Wine.

Polypody of the Oak; from half a Dram to Two.

Misseltve of the Oak and Hasel; from half a Dram to one and a half.

Root of Piony; from half a Dram to a Dram and a half.
Its seed from a Scruple to a Dram.

Berries of the Herb True-love, to a Dram.

Lime-flowers; from half a Dram to one.

Sudorifick Decoctions of Guaiacum, &c.

Elks-claws; from half a Scruple to half a Dram.

Shavings of Harts-horn; from half a dram to one.

Shavings of Ivory; from one to two Scruples.

Powder of Swallows, to a dram.

Coals of Mugwort in powder, on the point of a Knife.

Juniper-berries in Decoction.

Castor; from one Scruple to two.

Flowers of Lilly-convally; from half a dram to one;
its Root in Prisanes to half an ounce.

Natural Cinnabar, to 20 Grains.

Camphir; from three to six Grains.

The Powder of a Secondin; from half a dram to one.

Syrup of Tobacco; from half an Ounce to one.

Hony and Oximel of Squills.

Dung of a Peacock to a dram.

Liver of a Frog or an Eel dried, to two Scruples.

St. Johns-wort, Ladies Bed-straw, Sage; Root of
Wolfebane, Wall-rue, Wood-roof; In Decoctions.

Juice of Chervill in Broths.

Chymical Remedies.

Water of Lilly-convally, to four Ounces.

The Spirituous Black-cherry-water, drawn by Fermentation; from one Ounce to three.

Water of Lime-flowers, to four Ounces.

Water of Swallows; from one to four Ounces.

Querctetan's Water for the Epilepsy; from three drams to half an ounce.

Tincture of Castor, to two drams.

Spirit of a Secondin, to a dram.

Cinnabar of Antimony; from six to 15 Grains.

Spirits

Spirit of Ants ; from half a Scruple to two.

The Volatil oyl Aromatick Salt ; from four to 15 grains.

Laudanum, Narcotic Extract of Vitriol ; see *Narcotics*.

Volatil Salt of Tartar, to 20 grains.

Oyl of Bread, Clear Oyl of Amber, to six drops.

The Forms of Receipts.

A Water for the Epilepsy.

Take the *Waters of Lilly-conually and Lime-tree-flow-ers*, of each a Spoonful, to be taken each Morning fasting.

A Powder for the same:

Take of the Powder of *Misseltow of the Oak* half an ounce, black seed of *Male Piony* an ounce, *Amber* two drams, pulverise and mix them, and give every Morning the weight of a dram in three ounces of *Black-cherry-water*.

Another.

Take of *Amber well beaten* three drams, Powder of the *Stone found in one of the Ventricles of a Deer*, six drams, *Cinnabar of Antimony*, four Scruples, and one Scruple of *Laudanum*; dose half a dram.

A List of Remedies for the Apoplexy and Palsy.

Sage, *Marjoram*, *Thym*, *Juniper*, *Laurel*, *German-der*, *Ground-pine*, *Penny-royal*, *Wild Marjoram*, *Stoechas* ; In Decoctions for Drink to prevent the Apoplexy, and Cure the Palsy.

Extract of Hellebor, *Emetick Wine*, *Emetick Tartar* ; Urin drank with Salt ; see *Emetics*.

Cinnamon water ; from one to four ounces.

Essence of Cinnamon and Cloves ; from one to four drops.

Tridacte water ; from an ounce to three.

Of Remedies for Melancholly Deliriums,

Spirit of Wine Camphorised ; from two drams to an ounce.

Volatil Sales, to twenty grains.

Volatil Spirits, to thirty drops.

Powder of white Hellebor, to provoke Sneezing.

Blood letting.

Cupping glassses.

Sharp Glysters.

Frictions.

*The Forms of Receipts.**An Oyntment for a Paralitick Member.*

Take Oyl of Earth-worms, Oyl of Bays, of each two ounces, Castor in Powder two drams ; make an Oyntment to be applied hot upon the part.

A Spirit for the Apoplexy.

Take Castor, Cinnamon, Amber, of each a dram ; Volatil salt of Vipers, half a dram ; Treacle-water, Baum-water, spirit of Wine, of each an ounce ; let them stand so digest, and afterward distil in an Alembic ; dose half a Spoonful at a time.

C H A P. XXII.

Of Remedies for Melanchollic Deliriums, Madness and Rabies Canina.

*Melan-
cholly De-
liriums di-
stinct from
Hypocon-
driack Di-
stempers.*

WE must carefully distinguish a Melancholly Delirium, from Melancholick or Hypochondriack Diseases ; for tho these last are often times attended with Deliriums ; yet they are as often seen without any Disorder of the Head.

Hy-

Hypocondriack Distempers are known by Restlessness, peevishness, Fear on the least occasion, an unreasonable apprehension of Death or Sicknes, difficulty of Breathing, sour Belchings, frequent Spitings, rumbling in the Guts, palpitation of the Heart, &c.

*Signs of
Hypocondriack Distempers.*

If these signs be accompanied by an idle talking of Ridiculous or Tragical things, and all without a Fever; it is a Melanchollic Delirium.

Melancholly poisoning.

If the Patient is furious, has inflam'd Eyes, and strikes all about him, we may say he is Mad.

Madness.

And finally if he is afraid of Water, has been bitten by a Dog, foames at the Mouth, and offers to bite, &c. we call it *Rabies Canina*.

Canina Rabies

These Distempers seem to differ only gradually; and therefore we may here use the Remedies assign'd to Hypochondriack Diseases, to dissolve the Coagulation of the Mass of Blood: But 'tis observable that the Coagulation here is only in the Fibrous, not in the serous part; at least I have not found in these Distempers such a Viscid, or Clammy limph in the Blood as is to be seen in Rheumatick Diseases, Plurifies, &c. Yet I have ever found the Blood Gross, Thick, of a deep Red colour, and almost void of Serum, which it seems is easily separated from the Fibrous part by the Glandules, as being but loosely joyn'd with it: For which Reason possibly 'tis, that such Salts as unite these two parts, are here of great use. I shall not speak of Foliat Tartar, Iron, and preparations of Lead, having done it else where: I shall only add we ought to have a principal regard to the Disorders of the first Passages in all Melancholly Distempers; for the Belchings, Rumbings of the Guts, &c. are convincing proofs, that these parts are Embarrassed: Wherefore Emeticks at the beginning give great Relief. You may successfully use preparations of Antimony, of Black Helebor, and sometimes of the White, which you may give in Infusion from a Scruple to half a Dram.

Immediate Cause.

M m 2

Pur

*Purga-
tives.*

Purgatives oftentimes exasperate the Disease when they are reiterated during its continuance: the best are made by mixing Coloquintida Corrected, with *Mercurius Dulcis*, or the Azure-stone, which ought to be much valued.

*Baths &
Bleeding.*

Baths, and Blood-letting may do good in some Cases, as also Glysters; for the Belly must always be kept open.

*Opening
of the
Piles.*

Some are much in love with the opening of the Piles; but I have never seen it do more good than letting of Blood; yea I have known them open of their own accord without any benefit to the Sick.

I have also observ'd, by a long use of Martial preparations, the Urin becomes Black, without any Relief; so that we ought not to lay much stress on such prognosticks, whatever some Authors may do.

*Narco-
ticks*

Narcoticks given by themselves do oftentimes Mischief, and torment the Sick to no purpose, by making them Vomit, &c. therefore they ought to be joyn'd with Specificicks, and may also be successfully mix'd with Purgatives in some Cases.

Volatils.

Volatils at the beginning sometimes occasion Disorders; but this may be prevented if we first give Absorbents, or mix them with Narcoticks.

Next to Opium you may use the Thorn Apple to drive away the Melancholly Phantoms; but if the Phantasy runs upon some particuler Object, you must strive to cheat the Patient out of it. Cinnabar of Antimony is the best Absorbent, and may be mix'd with Volatils, or Narcoticks, according as the Disease requires.

Specifics.

St. Johns-wort, Pimpernel, Baum, Bugloss, Bor-rage, Camphir, Liquor of young Swallows, Blood of an Ass, *Elixir Proprietatis* with Tartar, Essence of a Dogs Brains, and many other Remedies elsewhere spoken of, are commended for Specificicks in Madness, and Melancholly Deliriums. *Palmaris* recommends a Dram of the Powder of the Leaves or Roots of Betony as a Specificick for Melancholly.

I shall only say that in Madness, the Patient must be more roughly treated; Blooded often, sometimes plung'd in cold Water; Epithems and Lotions must be apply'd to the Temples, and Forehead, &c. to abate the motion of the Spirits, and procure Sleep: To this purpose you may use a Tincture of Camphir, Opium and Saffron, in Spirit of Wine: The Decoction of Willow leaves, Henbane, or Poppy-leaves in common Water, may be used in Lotions for the Feet; you may also mix Narcotics in Glysters, &c.

Observations.

Outward Remedies.

As for the Rabies Canina, so soon as the Bite is received, you must give cordials Inwardly; tie the Part, Scarify it, and wash it with Brine; fresh-water being improper, as *Palmarius* observes: After this you may carry the Patient to the Sea, in which you may Bath, and Plunge him two or three times. *Palmarius* describes a Powder that may pass for a Specifick; 'tis made up of Baum, Rue, Verbain, Sage, Plantain, Betony, St. Johns-wort, Wormwood, &c. 'Tis pretty hard to explain, how such a Composition and Collection as seems only to be made at a venture, should have so surprizing Effects: And yet 'tis approv'd by long Experience.

Rabies Canina.

All these Plants must be Collected in their strength and dry'd in the Shade. You may remark here, that the vertue of almost all Aromatick Plants, and such as abound more in Oyl and Salt than Phlegm, is improv'd by being slowly dry'd; by which means their Salts and Oyls are exalted; and on the contrary these which abound more in Phlegm and Volatil Salts are main'd by so doing, because their Volatil Salts, fly away in drying.

The same Author much commends Pimpernel, which of it self, as he says, will preserve from this Distemper. Some commend the Great Dittander, and Ashes of Crabs; others cry up the powder of Vipers, Venice Treacle, &c. all which Remedies may be good in some Cases.

A List of Remedies for Melancholy Deliriums.

A Ntimony prepared, Hellebor White, Hellebor Black, Mercurius Dulcis, Azure stone, Coloquintida; see Emeticks and Purgatives.

Preparations of Iron and Tartar, Volatil oyl, Salts, Betony, Pimpernel, St. Johns-wort; see Aperitives for the Hypochondriack Distempers.

Borrage, Bugloss, Chervil, Fumitory, Baum; In Decoctions.

Henbane, Opium, Thorn Apple, Camphir; see Narcotics.

Cinnabar of Antimony, Saffron, Myrrh; see Diaphoreticks.

The Juice of young Swallows, to an ounce.

Blood of As prepared, to two drams.

Juice of Apples to a glass.

Whey.

Baths.

Bleeding.

Smoke of Tobacco.

The Forms of Receipts.

Take of the Essence of Purple flower'd Pimpernel, made with its own Spirit, two ounces; and mix it with an ounce of the Juice of young Swallows.

An Epitheme for the Forehead.

Take four ounces of Water of Night-shade, half a dram of Sugar of Lead, half an ounce of the Tincture of Opium, Camphir and Saffron of each twenty grains; mix all together, apply Linnen Cloaths wet with this mixture to the Forehead, still wetting them as they dry.

A List of Remedies for the Rabies Canina.

Powders of Pimpernel, Wormwood, Crabs, Mint, Mugwort, Gentian, St. Johns-wort, Sage, Betony, and Baum; from a dram to half an ounce in Wine.

Roots of Gentian, Crabs eyes, Diaphoretick mineral, Powder of Vipers, to a dram.

Male Incense, Venice Treacle, Salt Water, Sea water; Outwardly.

The Forms of Receipts. Palmarius's Powder.

Take leaves of Rue, Vervain, small Sage, Plantain, Polypody, common Wormwood, Mint, Mugwort, Baum, Betony, St. Johns-wort, lesser Centory, of each equal parts, being all gathered on some fair day in June, and kept a year in a Shade: When ye use 'em beat 'em to powder. This Remedy if we may credit Palmarius its Author, is Infallible, if the Patient has not been bitten in the Head, nor the Part washed with Water. It is given to two or three drams in Wine: at the same time You must apply bruised Parsly upon the Bite.

C H A P. XXIII.

Of Cordial Medicines, and Counter-Poysons.

WE call those Cordial Medicines, which are successfully used in Disorders of the Heart, especially those that concern the whole Body; such as Swoonings, Faintings, the Plague, Malignant Fevers; and for as much as Swoonings are frequently caused by Poyson, I've thought fit to throw

Cordial
Medicines.

in Counter-Poysons into the same Chapter.

*Swoon-
ing.*

A Syncope or Swooning is an universal failure of all the Powers of the Body, wherein the Patient is without Pulse, Motion or Feeling. In this Fit the Parts are depriv'd of Blood and Spirits, either by great and sudden Evacuations; or by a Depravation of the Motion of the Heart, which may proceed from several Causes: First from great pains in Nervous parts, whence the commotion is continu'd to the Nerves of the Heart, so that 'tis violently contracted. Secondly, from the over-thickness, and as it were the Coagulation of the Blood which hinders the Contraction. Thirdly, from the too great dissolution of the Blood, by long use of Diaphoreticks; for the Spirits being walted, and the Blood rapidly mov'd, do in part hinder the Contraction of the Heart. Fourthly, from violent Passions of the Soul, such as great Joy, Fear, Love, &c. Their Influence stands upon the same bottom with the Union of the Soul with the Body.

*Different
Remedies.*

All these several Causes of Swooning, require their peculiar Remedies: If there's no other Disorder, but only a Weakness after Evacuations, Spirituous Medicines must be used; such as Spirit of Wine, the Queen of Hungary's Water, *Silvius's* Oily Salt; and the Fit being over the Patient must be cherish'd with strengthening Broths abounding in Volatil parts, generous Wines, and such other Nourishment as retrieves the Spirits, and repairs their losses: But you must take care ye do not over-agitate the Blood, for fear of dispersing the Spirits.

When the Distemper is occasion'd by excessive Pain, or other Passions of the Soul; we must endeavour to quiet the comotions of the Spirits, by throwing Water upon the Face, and causing pain in other parts: we may also apply Spirituous Remedies both to the Nose and Tongue to recall the Spirits; such as the Volatil Spirit of Sal-ammoniac, and Spirit of Harts-horn; and to mitigate the pain,

put

put Anodins upon the part. When the Swooning comes from a Pain on the upper Orifice of the Stomach, which often happens, whether occasion'd by Worms, or by sharp Humours; 'tis good to make the Patient drink some Spirituous Liquor, which will either loosen the Worms, or promote the Transpiration of the Humour.

Observations.

If the Malady proceed from the Thickness, and as it were congealing of the Blood, as it often happens to Melanchollic and Hypochondriacal Persons; 'tis good immediately to take some Volatil and Spirituous Remedy, to put the Blood in motion, as Spirit of Wine, Essence of Cinnamon, Cloves, Amber-gris, Cherry-brandy, Treacle-water, all Volatil Salts; *Silvius's* Oyly Salt, &c. After the Fit is over, to remove the Cause and consume the Acids, which congeal'd the Blood; we may successfully use fix'd Alcalis, as Crabs-eyes, Amber, Venice-Treacle, Mithridate, Orvietan, Confection of Alkermes, Confection of Hyacinth, and other Compositions abounding with Alkaline matters, which by little and little may free the Humors from congealing Ferments, and restore them to their former Fluidness. We may also use such Remedies as contain Volatil Alcalies and some Sulphurs, as Cloves, Nutmeg, Cinnamon, Mace, Cubebs, Angelica, Master-wort, &c. But these are not so fit for Melancholly Persons, because their Oyls will be apt to cause Inflammations.

Malignant Fevers may be the Cause of Swoonings: Yea prostration of strength and Synopes, are very frequent Symptoms in the beginning of Malignant or Pestilential Fevers: But since these kinds of Fevers may proceed from two opposit Causes, what is helpful in the one sort, is hurtful in the other. Oftentimes we see in Malignant Fevers a small and frequent Pulse, the Blood dissolv'd to such a Pitch, that it won't congeal in the cold, Bleedings, Restlessness, sparkling of the Eyes, all which are caused by a Sharp Volatil that has dissolv'd the Mass of Blood; and the Heart not being able to resist

Malignant Fevers.

Signs of Disolution.

*The use
of Acids.*

resist its Fermentative force, a Syncope ensues, together with Copious sweats that afford no relief: In this case we ought to use such Remedies as may incumber or fix that Acrimony; such are fix'd Alcalis, as Pearls, Coral, Crabs-eyes, seal'd Earth, and chiefly mineral Bezoar, Diaphoretick Antimony, Jovial Bezoar, &c. for those contain a Sulphur fit to sweeten the Volatil parts of that sharp Humor. Some Narcoticks may also be used; but what we may trust most to is Acids; such as Wood-sorrel, Barberries, Citrons, Verjuice, distill'd Vinegar, the Acid of Brimstone, and Spirit of Vitriol. Upon the same account we may use Nitre, Sal-prunel, Antimonial Nitre, which is drawn from the lotions of the Liver of Antimony. We must never use Remedies that are extreemly Volatil and Sulphurous, unless mix'd with some Acids; thus Venice Treacle, powder of Vipers, and Treacle-water must be mix'd with Syrup of Citrons; or you may make a distill'd theriacal Vinegar which will be of great use.

*Their
Choice;*

Altho all Acids are good in this sort of Malignant Fevers, yet these which coagulat least are to be prefer'd, as the Acid of Sulphur, Juice of Lemons and Wood-sorrel. It is observ'd of the Acid of Brimstone, that tho it Scarce yields to the strongest Acids, yet it does not congeal the Blood like the Spirit of Nitre, Vitriol, Salt, &c. Such Acids as don't coagulat, resist the exaltation of the Sulphurs, and alkaline Salts, without causing such Disorders as others; their Points, as it appears, being more fine, less bulky, and not so apt to gnaw or prick the Membranous parts through which they pass.

*Signs of
Coagulation.*

The other sort of Malignant Fevers, proceeds from a coagulating Acid; in these the Pulse is hard and strong; they are molested with pains in the side, difficulty of Breathing; their Blood drawn forth is dry and Viscid; they are tainted with an inclination to Sleep, and a disposition to sleepy Distempers: In this case we must have recourse to Aromatics

maticks and Volatils. Such as the Roots of Virginian Snake-weed, Master-wort, Angelica, Carline Thistle, Dittany, Zedoary, leaves of German-der, *Cardus Benedictus*, Baum, &c. the hot seeds, Flowers of Rosemary, Stœchas, Lavender, Cloves, Cinnamon, Saffron, Nutmeg, Mace, Aloes-wood, Cubebs, Musk, Ambergris, powder of Vipers, Volatil Salts, Venice Treacle, Treacle and Cinnamon-water, and other distill'd Waters.

*Aroma-
ticks.*

All these Mediçines are proper to put the Blood in motion, and retrieve its wonted thinness, by making the Acidities transpire which congeal'd it: But lest the Blood should be too much agitated on a sudden, it is best to begin with Medicines that abford Acidities, and penetrate through the Mass of Blood, without moving it too much. For this purpose we may use Mineral Bezoar, Diaphoretick Antimony, and fix'd Alcalies; for such at once destroy Acidities and sharp Volatils, and are proper in all Malignant Fevers, whether from the Dissolution, or Coagulation of the Blood.

*Use of Ab-
sorbenis.*

If the Stomach and Guts are ful of strange Ferments, all these Remedies will prove ineffectual: This case is attended by a bitterness of the Mouth, Loathings, Vomitings, and a Crust covering the Tongue: Here we must begin with some Emetick; and if need be we may reiterate it twice or thrice, that so the other Remedies may have access to act upon the Mass of Blood.

*A Cau-
tion.*

We come now in order to speak of Counter-Poysons; but seeing we cannot do it to satisfaction, without discovering the Nature of Poysons more than is fit to be done in a Treatise expos'd to Public View; I shall therefore only say that, let the Poyson be what it will, if it hath not been long taken, we must endeavour to expel it: If it is of very active parts, as Sublimat Corrosive, Asenick, Orpiment, we must give Remedies which consist of tenacious particles, as Oyl, or Milk, to hinder the Poyson to stick to the Fibres of the Stomach: After it is passed from the Stomach, or when the

*Poysons
and Coun-
ter-Poysons*

Fatal

Fatal Drug has been taken a considerable time past, we must use such Remedies as kill it : If it partake of sharp Salts, as Arsenick, you may use Acids, as Juice of Lemons, Rock-Chrystal, &c. If its parts are Acid, we use such things as clog them, as Oyl of sweet Almonds: If corrosive sublimate be the Poyson, You must sweeten it with Mercury, or precipitat it with Salt of Tartar: If it consists of Gummy and Narcotick parts, as Opium, and Hemlock; you must use Volatil Remedies, as stale Venice Treacle, Salt of Vipers, Castor, &c. or you may Exhibit Acids to Coagulat, and hinder the too great exaltation of their Sulphurs.

A Cataplasm.

There are also Swoonings that proceed from Worms bred in the Pericardium; for which nothing is better, than to apply to the Region of the Heart, a Cataplasm made with leaves of Arichoaks, Tanfy, Wormwood boyl'd in Vinegar, and Mixt with a little Mithridat.

A List of Cordial Medicines.

Cloves; from a scruple to a dram.

Cinnamon: from half a dram to a dram and a half.

Saffron; From half a scruple to two.

Nutmegs; from half a dram to a dram and half.

Mace; From half a scruple to half a dram.

Ambergris; from half a grain to four.

Bezoar Stone; from four grains to eight.

Virginian Snake-weed; from a scruple to a dram, in a convenient liquor.

Powder of Vipers; from six grains, to half a dram.

Leaves of Baum, Scabious, Carduus Benedictus, Meadsweet; by handfuls in Decottions.

Roots of Angelica, Zedoary, Master-wort; a dram in substance.

Leaves of Wood-sorrel, Sorrel, Juice of Lemons, &c. Barberries, Verjuice, in Pilsanes.

Car-

Carline Thistle, White Dittany, Gentian, Great Valerian, Tormentil; a dram in substance.
Camphir; from two grains to six.

Chymical Medicines.

Diaphoretick Antimony; from ten grains to twenty.
Poterius's Antihæctick; from six grains to two scruples.

Mineral Bezoar; from six grains to twenty.

Volatil Salt of Tartar; from six to twenty grains.

Tincture of Antimony; from five to fifteen drops.

Aurum Fulminans; from one to six grains.

Essence of Ambergris; from two to twelve grains.

Oyl of Cinnamon; from one to four drops.

Its Spirituous water; from one dram to two ounces.

Waters of Carduus Benedictus, Mead-sweet, Baum, Scabious; from two to seven ounces.

Salt of Nitre, Sal-Prunel, Nitre of Antimony; from half a dram to one.

Extracts of Baum, &c. from a scruple to a dram.

Its Salt; from ten grains to a scruple.

Queen of Hungary's water, half a Spoonful.

Aqua Vitæ, one or two Spoonfuls.

Spirit of Wine; from one to two Spoonfuls.

The Volatil oyl Salt; from four to fifteen grains.

Volatil Salts; from five to fifteen grains.

Spirit of Vitriol, and Acid of Sulphur; a few drops.

Distill'd Vinegar; a few drops.

Volatil Spirits; from eight to twenty drops.

Elixir Proprietatis; from six to 25 drops.

Treacle water, a Spoonful or two.

Tinctures of Castor, Saffron, Cinnamon, &c. from ten drops to a dram.

The Forms of Receipts.

For Malignant Fevers, Small Pox, Plague and Pestilence, without Sweating.

Take Roots of *Angelica, Master-wort, Swallow-wort,*
of each two ounces; Leaves of Carduus Benedictus a
hand-

handful, an ounce of Venice Treacle: Infuse all four days in three Pints of good Wine, and after distil in a Bath of Vapor; dose from one to three ounces.

A Julep for Malignant Fevers where Transpiration is too great.

Take Water of Bugloss and Violets, of each two ounces, and mix with one ounce of the Syrup of Limons.

C H A P. XXIV.

Of Remedies for the Pleurisy.

*Pleurisy
and per-
ipneumo-
nia.*

THe Pleurisy, and Inflammation of the Lungs are two Distempers very like, in their Causes, Symptoms and Cure. The first, is a Collection of Blood stopp'd in the Intercoastal Muscles and Vessels of the Pleura, and the other is a Collection of Blood in the Vessels of the Lungs; these two diseases are seldom separated: Having spoken of their Signs and Causes in my Treatise of *Acute Diseases*, I shall touch them but slightly here.

*Different
Causes.*

We may conclude from the situation of these parts, that their Inflammations must be accompanied with Fevers, pains of the Side, Coughs, Spittings of Blood, and frequently with some other Symptoms, which are not so ordinary as the preceeding.

Oftentimes Blood Coagulated by some Acid stops in the Vessels of the Plura, or Lungs, stays the Blood which circulates there, and obliges it to Ferment and irritate the Membrans of the Lungs and *Aspera Arteria*. This by it self may cause the Fever, Cough, Spitting of Blood, Pain of the side, &c.

Malignant Fevers where the Blood is somewhat Coagulated, may produce Epidemick Pleurisies:

For the thickned Blood being driven by the Fer-

ment.

mentation into the small Vessels through which it can't pass, must stop there. Drinking of cold water after violent motion may also cause a Coagulation of the Blood.

In other Cases, the Blood without any Coagulation be stopped in the Pleura and Lungs, in a great Fermentation, because the spring of the parts is not able to resist the impulse of the Liquors. Other Causes.

In the first kind of Pleurisy Blood-letting is hurtful; but it gives great relief in the latter. To discern the one from the other we must examine the Age, Country, season, the situation and quality of the pain, the Pulse, and the external causes that preceded the Distemper. Use of Blooding.

Some Physicians recommend Emeticks in a Pleurisy, among others *Rulandus*, *Quercetan*, and *Angelus Sala*. Use of Emeticks. For my part tho I think a Pleurisy is an opposit circumstance to Emeticks; yet I own they may be used in the beginning before the Inflammation is confirm'd, or when we find the Stomach and Guts stuffed with clammy Humors, which passing into the Mass of Blood, would considerably increase the Disorder; or when the Pleurisy is accompanied with a Malignant Fever.

In such Cases we need not be afraid of augmenting the Inflammation; on the contrary the Jolts of the Diaphragm and Muscles of Respiration, may fetch off the Obstructions from the parts. One may read the *Factum* of *M. Postel*, where may be seen more than a Hundred observations of Pleurisies cur'd thereby. Since some part of the Emetic passes into the Mass of Blood; it will be very fit to mix with it some Sudorifick water, in order to promote Transpiration.

In the beginning of this Disease we may successfully use such Precipitants, Absorbents, and Diaphoreticks, as absorb Acidities and dissolve Congeal'd Blood without causing any sensible Fermentation or Rarefaction. Such are Crab's eyes, Juice of wild-Succory, Daisies, the Jawbone of a Pike in powder, powder of wild a Boar's Tooth, Antimonial Nitre, Mixtures of Emetics and Diaphoreticks.
Sal

Sal-Prunel, Harts-horn, and all expectorating Medicines of the like character; that is, such as may cause Spitting without agitating the Blood; as Vipers grals, Liquorice, Maidenhair, Jujubes, &c.

*The Dis-
solution of
the Blood.*

But when the Blood is somewhat dissolved, and we mean to promote Transpiration, and inveigle the foreign Ferments; we use *Cardus Benedictus*, Mead-sweet, Baum, Flowers of red Poppy, powder of the Pizzle of a Hart or Bull, Blood drawn from a He-Goat, enraged by tying the hinder feet to the Horns, and cutting out his Stones, so that the Spifits and Blood are more intimately mixed by the Cholerick motions of the Animal, and rendered fitter to dissolve the clotted Blood.

We may also use Horse-dung steep'd in Wine; and finally Volatil Salts mix'd with Narcoticks in order to promote Transpiration, and mitigate the pains. But Narcoticks must be cautiously used, as I intimated, when speaking of their manner of Operation. If the pain be not very violent, the safer way is to employ such other Medicines as are apt to soften the stinging particles by virtue of their Sulphur, and at the same time make 'em Transpire by virtue of their Volatil Salts. Such are those I mentioned but now. To which we may add *Quercetanus's* Apple; Frankincense being the basis of its virtue, which is indow'd with such Volatil and Balsamick parts as are apt to defeat Acid Ferments, and throw 'em out by Transpiration.

The External Remedies are made up of Ingredients apt to open the Pores, unbend the distended Membrans, and mitigate the pain. Of this Nature are the Hot and Emollient Oyls, such as those of Bays, Marshmallows, *Unguentum Martiatum*, &c. apply'd by themselves, or mix'd with *Aqua Vita*. For the same purpose we likewise use Fomentations of Penny-royal, Melilot, and Lilly Roots; Cataplasms of Saffron, Bread, Milk, White Onions, Lillies, the Plaster of Melilot, Pepper, Ginger, &c.

'Tis needless to insist on the different Circumstances to be observ'd in applying these Remedies. Those that are Curious may consult our Treatise of *Acute Diseases*. In the mean time I reckon 'twill not be improper to inquire more particularly into the Nature of Dazies, shining Soot, Olibanum, Scabious and Corn Poppy.

The Flowers of Corn Poppy contain some Acids, a Few Urinous Spirits, some Volatil Salts, some Oyl, with a great deal of Earth and Phlegm. We are wont to Exhibit with success a Ptisane of these Flowers, Scabious Root, and Liquorice, in Pleurifies and dry Coughs. Their Syrup is much esteem'd for the same purpose; as likewise their Tincture made by several Infusions of the Flowers and a little Sugar. Their Distill'd water is Pacific, Sudorific and proper in the same distempers. It may be mix'd with the Syrup for composing and procuring Sleep.

Wild Poppy flowers.

Dazies afford some Acid Liquors, some Urinous Spirits, a concrete Volatil Salt, an Oyl, a great deal of Phlegm and Earth, and a fix'd Salt; which, tho it have not a very Lixivious taste, yet 'tis a strong Alkali, for it makes a Yellow Precipitat in the Solution of *Sublimatum* as well as the fix'd Salt of Beanstalks. Hence we may conclud, this Plant is an Excellent Vulnerary, and fit to dissolve Clotted Blood by imbibing the Acids; without occasioning any great Fermentation. Accordingly 'tis much approv'd in Pleurises, *Peripneumonia's*, difficulty of breathing, &c. occasion'd by sudden Cold immediatly after a great heat. As also in Falls, Spittings of Blood, &c. 'Tis used by way of Decoction in Ptisanes or Broth. Some Extract a Tincture from the Flowers and Poppy flowers, by sprinkling 'em first with Spirit of Vitriol or Sulphur, and then pouring on hot Water. But to my mind they stifle all their vertues by stuffing 'em thus with Acids before they enter the Body.

Dazies.

Scabious resembles the two Plants now mentioned both in Vertues and Principles. It affords

Scabious.

N^a some

some Volatil Salts, and a few Acids ; both of 'em intangled in Phlegm, Oyl, and a great deal of Earth. 'Tis Resolutive, Emollient and Sudorific. Its Root or flowers may be administred by way of Decoction. The Distill'd Water is likewise used,

Soot.

Soot of Ovens or Chymnies, providing it shines, abounds in Volatil Acids and Oyl ; and yet contains some Urinous Spirits and fix'd Salts. Upon which account its principal vertue in Substance lies in Drinking in the Congealing Acids, and making the Blood fluid. 'Tis recommended for Falls, Pleurifies, and Hysterick Passions. We give it from a half to a whole Dram in a convenient Vehicle ; some to augment its force mingle it with such Remedies as Expel a Dead Birth, &c. Some use it with Salt and Vinegar as an Amulet against Fevers. Others recommend it against Bleeding.

By Distillation it yields an Acid Spirit, which given to half a Scruple in a proper Vehicle, procures sweat, strengthens, and checks Malignant Fevers, Epilepsies, and Venereal Symptoms. The Oyl drawn with a Retort is much cryed up for facilitating hard Labour, being given to three or four drops: In External use, it Kills the most stubborn Itch, and in Plaisters is very serviceable for Old Ulcers. Its fixed Salt is very good against Ulcerated Cancers.

Olibanum.

Frankincense consists of the same principles with other Rosins. 'Tis an Excellent Vulnerary, and highly useful when the Lymph of the Blood congeals or turns Acid. Accordingly 'tis given successfully in Catarrhs, Coughs, Asthma's, Headachs, Pleurifies, Loosnesses, Dysenteries, &c. and that either by it self to half a Dram, or rosted in an Apple to a Dram. 'Tis used also in Fumigations for Catarrhs or a *Tenesmus*. Some pretend to Correct *Quercetanus's* Antipleuritic Apple, by adding the flowers of Sulphur to the Frankincense before 'tis Rosted. The Oyl of Frankincense is mightily esteemed in Phthificks.

A List of Anti-Pleuritical Medicines.

Emetics.

Sudorifics.

Crabs Eyes; from half a dram to one.

Gun-powder Wash'd in Elderflower Water, to two or three scruples.

The powder of *Pikes Jawbones*; from half a dram to one.

The Bone of a *Stags Hart*, Powder of *Bears Teeth*; from half a dram to one.

Shavings of Harts-horn, *Wild Succory*, *Dasies*; in *Ptisanes*.

Powder of *Goats Blood*, prepar'd after *Vanhelmont's* method; from one to two scruples.

Powder of *Hare's blood* kill'd by *Hounds*; to the same dose.

A *Stag's Pizzel*, a *Bull's Pizzel* in powder, *Sperma Ceti*, *Horse-dung*, *Pigeons-dung*, *Mule's dung*; from a scruple to a dram in a glass of *Wine*.

Flowers of Wild-Poppy, *Dasies*, *Caltrops*, *Columbines*; in Decoction with *Ptisanes*.

Shining Soot to a dram wash'd in *Elder Water*.

Flowers of Sulphur, to two scruples.

Sal-Ammoniac to half a dram.

Frogs Spawn apply'd outwardly with *Clouts*.

Chymical Medicines.

The *Waters of Carduus Benedictus*, *Wild Poppy*, *Meadsweet*, *Baum*; from two to six ounces.

Antimonial Nitre, *Sal-Prunel*; from half a dram to one.

Tincture of Antimony from six to fifteen drops.

Volatil Salts; from eight to twenty grains.

Diaphoretic Antimony, *Bezoar mineral*; from ten to thirty grains.

Forms of Receipts.

Vanhelmont's Potion describ'd by Dolæus.

Take Crabs Eyes, boyl them in Wine; and exhibit it for a draught.

Quercetanus's Potion.

Take Red Coral, red Filbeards, and Pikes Jambone, make a powder and administer a dram in four ounces of red Poppy Water, This Remedy is near a kin to Anti-Pleuritical Medicines; but I doubt if ever it can by it self cure a form'd Pleurisy; whatever the Author may alledg to the contrary.

Quercetanus's Apple.

If the Disease continue beyond three days; Take a dram of Frankincense. Roast it in the Cavity of a Short-stem'd Apple, so that it be mingled with its substance. Then let the Patient eat it with a little Sugar, drinking above it three ounces of Carduus Benedictus Water, and covering himself up to Sweat.

An Anti-Pleuritical Potion.

Take half a dram of prepar'd Goats Blood, as much of the powder of a Stags Pizzle, half a dram of Bezoar Mineral: Dissolve all in four ounces of the Water of red Poppy.

A Cataplasim to remove Pleuritical pains.

Take twenty white Onions, boyl them a little in Milk; then add Pepper in powder, half a dram of Saffron; make a Cataplasim of one half of it; and after four hours, if the pain continue, apply the other half hot.

Another from Digby.

Apply half a Loaf just taken from the Oven, with Venice Treacle.

C H A P. XXV.

Of Stomachical Medicines.

Ofentimes the Stomach is disorder'd by a prevailing croud of noxious humors, which unbend its Fibres and hinder the Stomachical Ferment to exert its force upon the Victuals. Sometimes these humours are Acid, sometimes bitter. In both Cases 'till be requisit to Evacuat 'em by a Gentle Vomit, without which all Stomachical Medicines are to no purpose. After the offensive humour is cast out, the Fibres sometimes continue lank and unbended, so that the Stomach does not duly contract it self, nor push out the Chyle. This Lankness of the Fibres cannot happen when Cholera prevails in the Stomach, because that rather contracts 'em by virtue of its bitter and Styptic parts. However this contraction is likewise the Author of many disorders. It makes the Stomach incapable to receive a convenient quantity of Food without pain; and in a word intails upon it a disrelishing squeamishness. In that Case we may Administer Acids diluted with large Quantities of Water. Such are Ptisanes of Sorrel Roots, Wood-sorrel, Pippins, Barberries, &c. The Syrup of Cherries, Limons, Verjuice, &c. But above all the Volatil Acid Spirit of Bread gives the surest and greatest relief.

The disorders of the Stomach.

Stomachical Acids.

The Relaxation and Lankness of the Fibres of the Stomach is commonly occasion'd by prevailing moisture, or by Phlegm somewhat over-charg'd with Acids. In this Case we Administer such Stiptic and Astringent Remedies as are possess'd of some Volatil parts, in order to retrieve the due motion of

the Spirits. Their use is inforc'd by these Reasons.
 1. They drink up the Acids and Moisture which over-run the Fibres. 2. They call up the Spirits. 3. By vertue of their tenacious parts, they unite and compact the Fibres. For these Reasons the following Medicines are reckon'd proper on this occasion; namely Wormwood, Orange-peel, Roots of Cuckowpint, Citron-peel, Pomgranats, Pomgranat-flowers, Sanders, Myrrh, Myrobalans, Mastic in drops, Mint, Tosted Rhubarb, Cinnamon, Cloves, Nutmegs, Mace, Spike, Saffron, Lavender, Brandy, Chocolat, Germander, Groundpine, flowers of Stoechas, Camels Hay, Pepper, Ginger, and many others abounding in Volatil and Sulphureous parts. For Compounded Medicines, Venice Treacle, Mithridate, and *Confectio Alexandrina* are most in Vogue: Only we must be cautious we do not over-heat the Patient and throw him into a Fever.

*Worm-
wood.*

Wormwood by its Analysis affords an Acid Phlegm, Urinous Spirit, a little Volatil Salt, Oyl, Earth and a Lixivious Salt. It seems, its principal Vertue is lodg'd in a sort of Sal-mmoniac imbarassed with Volatil Oyls. This Plant is of excellent use in all Diseases where the Ferment of the Stomach is languid, by vertue of its Volatil parts it attenuates and cuts thro the Crude and Tough Chile which cloyes the Appetit, and murders Concoction. 'Tis used very successfully in Cachexies, Dropsies, Jaundice, Worms, Colic, and Hysterical Passions. It may be Infused cold in Wine. But the better way is to let it Ferment with new Wine: Both this and the Infusion fortify the Stomach and oftentimes put an end to Chronical Vomitings. We draw a Spirit from Wormwood by Fermenting it with Common Water, and then distilling: Which is admirable good against Colics; only 'tis a little too drying. The Extract of Wormwood given to a Scruple or half a Dram has the same vertue. The distill'd Oyl of this Plant, being apply'd to the Navel, will kill Worms. Its Lixivious Salt is a good Absor-

Abſorbent. If ye mix it with the juice of Lemons in ſome diſtill'd Water it allays Fevers. Some diſteſt it with the diſtill'd Oyl, and then diſtill it, thinking by that means to obtain its Volatil Salt, which, they alledge, is *Vanbelmont's* ſecret. But without ſo much ado, we draw a Volatil Salt with a Retort; which is as powerful againſt Fevers as the other.

Leſſer Centory goes almoſt upon the ſame principles with Wormwood, and is entitled to the like Vertues; nay in Fevers 'tis more in vogue. It has a very unpleaſant taſte, and therefore ought to be given in powder or Extract, eſpecially conſidering that all ſuch Remedies muſt be long continued, at leaſt in Chronical Fevers. Doſe of the Powder to a Dram, the Extract to half a Dram mix'd with the powder of the Jeſuits Bark. *Palmarius* makes a powder of the Tops and Seed of this Plant, which he cries up much. He gives it to a Dram in Wine againſt the Plague and Malignant Fevers.

*Leſſer
Centory.*

Germander affords a ſmall quantity of Acid Phlegm, ſome Urinous Spirits, a little Volatil Salt and a great deal of Oyl. Its chief vertue lies in an oily Volatil Salt. This and almoſt all Aromaticall Plants operate better dry than green. Its Powder given to a Dram in Broth cures Intermitting Fevers, the general Remedies being premis'd. The Decoction of the dry'd Plant exhibited hot helps diſſeſtion and defeats the Acid Ferments which withſtand it. It may be ſerviceable in the Gout, Rheumatism, Green-ſickneſs and Obſtructions of the Bowels.

Germander.

The Principal vertue of Cinnamon lyes in an Eſſential Oyl and Sharp Volatil Salts, temper'd by Acids. Its Powder mix'd with Viſtuals promotes Concoction, whets the Appetit and diſpels Wind. Its cold Infuſion in Wine is an admirable Stomachic and Cordial: It fortifies and procures Sweat. We are wont to put its powder into boiling Water, in order to extract a Tincture, which is excellent in all Fevers ſuſpected of Malignity. Four or five

Cinnamon.

drops of the distill'd Oyl will fortify the Stomach, resist Poison and cause Sweat. They must be dissolv'd with Sugar in some convenient Vehicle. Its Tincture extracted with Spirit of Wine enjoys the same vertues. I pass over the other Stomachical or Aromatical Ingredients, because they are either of a Piece with those now describ'd, or else will come in upon other occasions.

A List of Stomachical Medicines.

Wormwood, Ground-pine, Germander, Orange-peel, Citron-peel, Pomgranat-peel, Pomgranat-flowers, Saunders, Myrrh; from half a dram to one in Substance.

Myrobalans; from half a dram to one.

Rhubarb the same, Cinnamon the same.

Cloves; from one to three scruples.

Nutmegs; from half a dram to one and a half.

Amber; from ten to thirty grains.

Saffron; from half a scruple to one.

Flowers of Stoechas; from half a dram to one.

Camels-hay; from a scruple to a dram.

Juice of Lemons, Verjuice, Vinegar, Sorrel, Wood-sorrel, &c.

Chymical Medicines.

Tincture of Cinnamon; from half a dram to two.

Oyl of Nutmegs; from four to ten Grains.

Tincture of Saffron; from 4. to 22 drops.

Myrrh; from 6 to 25 drops.

Extract of Rhubarb; from 10 to 40 grains.

Poteries's Antibellitic; from ten to 30 grains.

Spirit of Vitriol, The Acid of Sulphur, in Ptsanes;
as an agreeable Acidity.

Forms of Receipts.

A Conserve to fortify the Stomach.

Take Orange and Citron Peels prefero'd, of each two ounces; Cloves and Cinnamon, of each two drams; Shavings of Nutmegs a dram; Crabs eyes half an ounce; with Syrup of sweet-Briar make an Opiat, to be taken every Morning to the bigness of a Nut.

C H A P. XXVI.

Of the Medicines which kill Worms.

Worms are bred in the Stomach and Guts, when the Ferments that dissolve the Victuals, have not strength enough to Split the Eggs they meet with: In that case the Chyle being too coarse to enter the milky Vessels, lingers in the Guts and grows sower; and the Person is molested with sweetish sower Belchings: For though the Chyle in effect be Acid, yet the large quantity of Sulphur it contains, does still keep up somewhat of the original sweetness.

The Original of Worms.

When we offer to attack the Worms, we must endeavour to expel that matter which cramps the Ferment, and withal joyn in such Remedies as by Vertue of Cutting and unequal parts are qualified to break thro the soft substance of these Creatures, and at the same time drink up the Acids of the Chyle which thicken the humors and imprison the Ferments. Most bitter things will answer these Indications. Aloes, Coloquintida and Rhubarb purge out the Glutinous matter; and being possess'd of sharp Particles, do likewise dissolve the substance of the Worms. Perhaps they may also operat as Alkali's, and drink in the Acids.

The Power of Remedies against Worms.

There

There are other bitter Ingredients, which are not Purgative, and yet kill Worms. But, in order to root the Worms quite out, and prevent their return, We are oblig'd to joyn these Ingredients to Purgatives. By this means we at once destroy the Worms, and carry off the matter in which they are hatch'd. The Medicines I now speak of are Wormwood, lesser Centory, bitter Almonds, the Seed of an Exotic Plant call'd *Semen Contra*, &c.

Besides the bitter Remedies, there are many others good against Worms. Acids are an Instance. But they only operat by means of their pointed cutting parts, and do not remove the Cause, and therefore are not so much esteem'd as those abovemention'd.

The effect
of Oyls.

For the same Reason Oyls are not to be relied upon. 'Tis true they stifle and choak the Worms by stopping up the minute passages of their Lungs: But they do not remove the matter in which they're hatch'd. Nay on the contrary they help to cloud and Fetter the Ferments, which if left loose would of themselves expell the growing Brood.

Mercuri-
al Medi-
cines.

Besides the now mention'd Oyls, Acids, and bitter Medicines; there are others in use among Physicians, which neither intangle like Oyl, nor cut like Acids, nor disoblige the Palat as bitter Medicines, and yet are as effectual as any. Such are the Mercurial Medicines. They insinuat themselves into the substance of the Worms, and dissolve it: They penetrat into and attenuat the slimy humor, and sometimes purge it out: And in fine by vertue of their absorbent parts they defeat the Acids in the Chile. The best preparation from Mercury for this purpose, is *Mercurius Dulcis*; If ye mix it with a solid Purgative it performs wonderful things. Crude Mercury it self is not improper. It may either be given in Substance, or boy'd in Water.

Glysters
of sweet In-
gredients.

Sometimes we prescribe Glysters of sweet Ingredients, such as Milk and Sugar. The Common Plea is, the Worms are fond of these things, and follow them out.

Som-

Sometimes we apply to the Navel Cataplasms of sharp or bitter Ingredients, especially when we suspect Worms in the Navel. For this purpose the powder of Savin is particularly recommended: We mix it with the powder of Venice Glass and Honey, or any other sweet thing that may invite the Worm to feed upon it, and so kill it self. 'Tis with the same view that we are wont to joyn the Internal bitter Medicines to sweet Ingredients, because by that means the Worms swallow 'em more greedily, and so hasten their own Ruin.

Cataplasms and Ointments

A List of Medicines which kill Worms.

A Loes; from half a dram to one.

Coloquintida; from six grains to twelve.

Lesser Centory, Semen-Contrā; from a scruple to a dram.

Bitter Almonds, Juice of Limons in ordinary drink, Sorrel in Ptisanes, Strong Wine, Oyls.

Crude Mercury; from a dram to half an ounce in *Ptisanes and Decoctions.*

Chymical Preparations.

Extract of Aloes; from one to two scruples.

Centory Water; from two to four ounces.

Sweet Mercury from six to thirty grains.

White Precipitat; from two to six grains.

Mercury Calcin'd by it self; from two to five grains.

Spirit of Vitriol, The Acid of Sulphur, in ordinary drink, to an agreeable Acidity.

The Forms of Receipts. Purging Pills.

Take half an ounce of Aloes pulverised, a dram of the powder of *Coloquintida* besprinkled with the *Volatil Spirit* of.

of *Sal-Ammoniac* aud dry'd, two drams of sweet *Mercury* pulveris'd, a dram and a half of *Scammony*; Incorporat all with a sufficient quantity of fresh *Butter*, and make a *Mass* for *Pills*, to be given from one to two scruples.

A Liniment.

Take half an ounce of *Bull's Gall*, a dram of the *Oyl* of *Wormwood*, half a dram of *Coloquintida* in powder; make a *Liniment* to be apply'd at three times to the *Navel*.

C H A P. XXVII.

Of Anti-Dysenterical Medicines.

*Signs of a
Dysentery.*

A Dysentery is a Bloody Looseness, attended by Pains and Gripes. In the Beginning the Person Voids the Slime of the Guts, afterwards Bloody-Clots, &c. This disease takes rise from a Sharp humor, which is either lodg'd in the Stomach, or, as it often happens, in the Mass of Blood.

Vomits.

If the Person be molested with a propensity to Vomit, 'tis a sign the Stomach is crouded with tough slimy matter. In this Case we give half a Dram or two Scruples of *Ipecacuana* in Broth. The Reasons which oblige us to begin with this Emetic Root are these. 1. All the Remedies we can invent to correct the sharpness of the Blood, are to no purpose, unless we evacuate the foreign Ferments which nestle in the Stomach. 2. This Root is possessed of Stiptic parts which likewise correct the sharpness of the humors.

In want of this Root we may exhibit Emetic Tartar mingled with some Cordials.

Cordials.

Oftentimes Dysenteries are tainted with Malignity, that is, there are some Malignant Fevers, where a Corrosive Volatil humor prevailing in the Mass of Blood, ulcerats the Guts. In that case we administer the powder of *Vipers*, *Stags-Pizzle*, *Bulls-Pizzle*,

Pizzle, Volatil Salts and the Sudorific preparations of Antimony.

Sometimes we make use of the same Remedies, when the Dysentery is free of Malignity. Most Diaphoreticks, and all absorbents, are always proper, as being apt either to drink in or expel the Acid and sharp humors that give rise to this Disease. We are wont to make use of Harts-horn, Ivory, and Burnet, by way of Ptsane; Crabs-eyes, Coral, Amber and Stomachical Syrups, in Potions. At first Astringents ought to be avoided, because they hinder the Evacuation of the sharp humor. Purgatives are very rarely used, because they inflame the irritation.

Sometimes we add to Diaphoretics a few grains of Laudanum, which is very serviceable in composing the Spirits, and appeasing pain.

If we make use of Purgatives, they ought to be well stock'd with Sulphureous parts, which either suck up or mollify the sharp humors. Upon this account, Rhubarb, Myrobalans, and the double *Catholicum* are prefer'd to all other Purges. Mr. Boyle in his *Treatise of Specifics*, does mightily cry up Sweet Mercury mix'd with the Extract of Rhubarb.

Glysters injected for a Tenesmus or Dysentery ought to be more Emollient than Detergent. They ought not to be frequently made use of, for fear they augment the Irritation. We generally make 'em up of Milk, Kirchin Sugar, yolks of Eggs and Turpentin; or of the Decoction of *Tapsus Barbatus* with Honey of Roses, or of Tripe-broth. Among the Testaceous Powders recommended against Dysenteries, Bones and Calcin'd Horns are most esteem'd. Mr. Boyle recommends the shaving of a Man's Scull to a dram: *Vanhelmont* crys up the Moss of a Man's Scull, and backs it with incredible Experiments. The powder of Crystal, Sea-horse teeth, Crabs-eyes, Amber, &c. are much in use.

The Medicines which fortify the Stomach and expel the humor by Transpiration, are Water Germanander, Mint, Wormwood, Cinnamon, Nutmegs, Vipers, Venice-Treacle, Bread bak'd up with

Diaphoretics.

Narcotics.

Purgative.

Glysters.

with the Juice of Elder-berries, powder of Stags-Pizzle, Eels-livers, Vipers-livers or those of Green Frogs, the Blood of a Hare or Lamb dry'd, &c. The Pacific Ingredients are *Laudanum*, Syrup of Poppies, Emulsions made up with the Decoction of a Stags-Pizzle and Sweet Almonds, Poppy-seed. &c.

In the Altringent Class, we reckon up the Decoctions of Oak-leaves, Cork, Crude Allum, Gelly of Quinces, Juices of Plantain and Ground-Ivy. But, as I intimated before, they are of dangerous use in the beginning.

Externally we may order Fomentations for the Belly, or apply to it, a Quart of hot Milk in a Bladder, or convey the fumes of *Tapsu Barbatus* to the Fundament, or the Vapors of Burnt Harts-horn.

A List of Anti-Dysenterical Medicines.

Ipecacuana ; from half a dram to two scruples.

Crabs-eyes, Coral, Amber ; from half a dram to one.

Sea-horse-teeth, Shavings of Harts-horn and Man's Skull, Moss of the Scull, Crystal in powder, Allum in red Wine ; from a scruple to half a dram.

Album Græcum, to a dram.

Hare's and Lambs Blood, Stag's-Pizzle in powder ; from half a dram to one.

Livers of Serpents, Eels, Vipers, and Green Frogs ; from ten grains to half a dram.

Citron-peel, Cork, Burnet, Harts-horn, Ivory, in Decoctions.

Syrups of Wormwood, Coral, Poppies, and Quinces ; from half an ounce to one.

Chymical Preparations.

The Water of Oak-leaves to four ounces.

Cinnamon water to two ounces.

Laudanum to a grain.

Waters of Tormentil, Shepherds purse, &c. from two to four ounces.

Extract of Rhubarb, to a dram.

Sweet Mercury, to twenty grains.

The Forms of Receipts.

A Potion.

Take Plantain and Rose waters, of each two ounces; beat 'em up with the white of an Egg, for a draught.

Another Potion.

Take a dram of Walnut-flowers pulverised, dissolve 'em in two ounces of the Water of Walnuts, and an ounce of the water of Oak-leaves.

An Apple for Dysenterical Pains.

Take a dram of Gum Arabic, a scruple of Mastic, two grains of Laudanum, pulverise and rost them in an Apple or Quince excavated for the purpose. This Apple being Astringent ought not to be given till after Purgation.

C H A P. XXVIII.

Of Hepatic or Splenetic Medicines.

THE Antient Physicians amassed together a Medley of Remedies, which they gave out for Specifics against all disorders of the Spleen or Lungs. They believ'd the Structure of these two parts was much alike, and accordingly confounded both their Diseases and Remedies. But experience has at once disproved their Opinions, and frustrated their expectations. We find the Liver Glandulous and the Spleen full of Cells; the one strains out the Bile, the other

other separats no liquor at all. And consequently their disorders and appropriat Remedies must needs differ widely.

In Obstructions of the Liver we make use of the same aperitives, as are commonly used against Obstructions of any other part; so that we meet with nothing peculiar in this Case.

As for the Spleen I must tell you by the way, that 'tis oftentimes charg'd with Diseases where 'tis not atal concern'd. The Colon when blown up presses upon it and makes it jet outwards; and the Wind in the Gut is commonly the Cause of the pain which we falsely fasten upon the Spleen. However thus much is true, That since the Spleen is imploy'd to refine the Blood, 'tis certainly affected in all diseases attended by a Grossness and Thickness of the Blood, as in Hypochondriacal Melancholy, and the Scurvy: For when the Blood is Thick it lingers too long in the Spleen and distends its walls. In this Case we exhibit fix'd and Volatil Alkali's with Aperitives, and above all the preparations of Steel, and Mercury bating the case of the Scurvy. The preparations of Steel remove the Obstructions both of Liver and Spleen; partly by imbibing the Acids, and partly by Splitting the Blood with its Massy Particles, and retrieving its Liquidness.

There are other Medicines commonly styl'd Hepatic and Splenetic, some for Heating, others for Cooling: But they only influence the Mass of Blood. Such are Agrimony, Wormwood, Asarabacca, Camels-hay, Spike, Fennel, Gilly-flowers, Pistach-nuts, Cinnamon, the hot seeds, Fumitory, Calamint, Speedwel, Germander, Baum, Cresses, Smallage, Gentian, Tamarisk, &c. Now these can only rarify the Blood and make it Liquid; and can have no direct influence upon the Liver or Spleen, unless it be by accident.

Sorrel, Purslain, Succory, Lettuce, Endive, the Cold seeds, Verjuice, Strauberies, Vinegar, Cherries, Oranges, &c. These Medicines, to my mind, must needs thicken the Consistence of the Blood,
what

what by linking its parts together with their oily Particles, and fixing it by their Acids. Now in as much as I have already discoursed of Attenuating and Incrassating Remedies in General; and that these now mention'd have no peculiar relation to the Liver and Spleen; I shall therefore put an end to this Head; and go on to consider the Remedies appropriated to the Diseases, which the Ancients charg'd upon the Disorders of the Liver and Spleen. To begin with the Dropsy.

C H A P. XXIX.

Of Anti-Hydripical Medicines.

THe Dropsy in General, without regard to its particular divisions, must be look'd upon as a Collection of Water in some part of the Body: Now this may be occasion'd by Opposit Causes.

Dropsy.

Sometimes it follows continual Fevers; Agues, especially Quartans, Asthma's, a suppression of the Terms or Piles, Obstruction in the Kidneys with a suppression of Urin, an Obstruction in the Glandules of the Mesentery, Liver, Spleen or Lymphatic Vessels, Immoderat Bleedings, Chronical Loosenesses, Foul Feeding or a Lazy Unactive way of Living, and sometimes takes its rise from Extraordinary motion, Spirituous food or Anger. Now these premises will teach us that there are two General Causes of this Disease.

The Coagulation of the Blood.

One is the Coagulation of the Blood, and its tardy Circulation. Lower tell's us, he ty'd the *Vena Cava* of a Dog just under the heart; and soon after observ'd the Abdomen and Inferior parts over-run with a Dropsy; which cannot be attributed to any other Cause than the want of due Circulation: For when the Artery throws in more Blood than the Veins do carry off, 'tis a natural Consequence; that the more fluid or serous part of the Blood will break thro the Pores, and over-run the Muscles.

O O To

To this Cause we might joyn the particular Coagulation of the *Serum* of the Blood, unqualifying it for separation in the Kidneys. 'Tis for this reason, we see the Urin of Hydropical Persons, especially those seiz'd with an *Ascites*, is commonly very Thick and Scanty.

The Dissolution of the Blood.

The other Cause is the uncommon fluidity or extraordinary motion of the Blood, which drives many serous parts into the Pores, where naturally they ought not to pass. The Dropsy that takes rise from this Cause is easier to Cure, and more unfrequent than the former.

Since Dropsies are attended by a Croud of Serosities in the first Passages, and Obstructions in the Blood and Lymphatic Vessels, and Excretory passages; doubtless, Vomits and Purges must needs be proper to throw out the *Serum*, and by vertue of their sharp Volatil particles to dissolve the Obstructions. Upon this design we make use of Emetic Tartar, black-Helebor, Elaterium, Gutta Gamba, Jalap, Crystals of Silver; the Rind, Seed and Juice of Elder or Dwarf Elder, the Juice of common flower de luce, Turbith, Bindweed, Gum-Ammoniac, the Bark of black Alder, Coloquintida, sweet Mercury, Buckthorn, Hermodactils, Extract of *Esula*, &c.

Diuretics and Sudorifics.

Diuretics and Sudorifics are likewise imploy'd to evacuat the *Serum*, remove the Obstructions, and retrieve the Liquidness of the Blood. Such are the Lixive of the Ashes of Wormwood or Broom made with Wine, the Salts of these Plants, Salts of Tartar and Bean-stalks, Juniper-berries their Extract; the Decoction and Juices of Chervil, Fennel, Parsly, Winter Cherries, and Bay-berries, white Onions, and almost all the Carminatives; Millet seeds peel'd and boyl'd in Water, the Diaphoretic preparations of Antimony and Mercury, the powder of Woodlice, Goose-dung, the Volatil Salts of Frogs, Toads, Tartar, Sal-Ammoniac, &c.

External Remedies.

Externally we may apply to the Kidneys Toads cut up through the middle; *Vanhelmont* tells you the Volatil parts that pass from 'em are capable to remove

move

move the Obstructions of the Urinary Passages, which he gives in for the Cause of Dropsies. And *Riverius* Confirms this practice by the Observations of several Authors.

We must take care not to over-weaken the Stomach with Emetics: We must likewise be sparing in the use of Purgatives; only, when we Purge, let the Medicine be very strong. For weak Purges are to no purpose in this Disease. Above all 'twill be needful to keep a strict *Regimen*, and avoid Liquors. Some have been cur'd merely by that: For any Liquid thing presently enters into the Blood, and being easily extravasated, augments the *Serum* and weakens the parts.

All sorts of Drink must be particularly avoided, when the Dropsy takes rise from the liquidness of the Blood. When we exhibit Purgatives, 'twill not be improper to joyn Rhubarb to 'em. If we administer any sharp evacuating Remedy we had best add to it something that may prevent its dissolving of the Blood; such as Tartar Vitriolated, the Dulcified Spirit of Nitre, the Spirit of Salt rectified with quick-Lime, Nitre, the Vegetable Sal, Sal-Prunel, Sorrel and Succory Roots, the Juice of Pomgranats, Vitriolic Waters, &c.

*Liquids
improper*

*Mix'd
Salts*

There are several ways of evacuating *Serum* by External Application. *Aquapendens* orders you to steep a Sponge in Lime-water, and after 'tis a little squeeze'd lay it upon the Belly. Others prescribe Plaisters or Cataplasms of Cows-dung and Camels-dung burnt, and mix'd with the Oyl of Worms, to be applied to the *Abdomen* or *Kidneys*. And at last when all other stratagems are ineffectual, we injoyn a *Paracentesis*; but in case of Internal Schirrus's even that is to no purpose.

To Quench thirst, we may order the Patient to hold Nitre in his Mouth, or chew Mastic.

*External
Drying
Medicines.*

As for the Blistering Plaisters, Scarifications, &c. for the Legs and Thighs; the Tapping of, or application of Cauteries to the Scrotum, or Lips of the Matrix; I never saw much good of 'em, and therefore shall pass over 'em.

*Blistering
Plaisters,
&c.*

O o 2 Some

Sometimes Glysters of Hot and Spirituous Ingredients are very proper, to dispel Wind and Drain some part of the Waters by Stool : We use to add some sharp Medicines to 'em, in order to make 'em Purgative. Of this sort are the Glysters of Child's Urin, Juniper-berries and other Carminatives.

A List of Anti-Hydropical Medicines.

Extract of Esula, to two drams in any Liquor.

Black Hellebor, its Extract, Gutta Gamba, Emetic Tartar, Oximel of Squills, Asarabacca, Briony roots, Coloquintida, the outward Bark of Black Alder, Gum Ammoniac, Dwarf Elder ; its Flowers, Seed and Juice ; Elder its Flowers, Seed and Juice ; Buckthorn, Juice of common Orriis, Turbith and Hermodactils, Jalap its Resin, Rhubarb ; see Emetics and Purgatives.

Juniper-berries, their Rob and Extract, Millets peel'd and boyl'd in water, Wood-lice in Powder, Volatil Salt Ammoniac, the Hot Seeds ; see the Sudorifics.

Toads in Powder, to a scruple.

Their Volatil Salt to five grains.

Garlic and Onions, Parsly, Fennel, Chervil ; by handfuls in Decoction.

Their distill'd Waters, to six ounces.

Spirit of Worms, to 24 drops, Spirit of Urin, to 20 drops ; in some Liquor.

Ashes of Broom, Vine-twigs, Wormwood and Willows ; two ounces to a Quart of Wine for a Lixive.

Pigeons-dung, Succory-roots, Cream of Tartar, Tartar Vitriolated, Vitriol of Steel, the Vegetable Salt, Nitre, Sal-Prunel, Crocus of Steel, Spirit of Salt Dulcified, Turpentine, Eringo-roots, &c. see the Diuretics.

Toads cut up, Goats-dung and Urin, a Spung soak'd in Lime-water, Camels and Cows-dung, Snails bruised and apply'd with the Shells ; applied Outwardly.

The Forms of Receipts.

Lunar Pills.

Take three grains of the Crystals of Silver, incorporate 'em with Crum of Bread to the Consistence of Pills. They Purge Hydropical Waters gently. The Crystals of Silver

are prepar'd by dissolving a convenient quantity of Silver in thrice as much of Spirit of Nitre. Then evaporating the Solution to one half, and setting it to Crystallize.

Powder of Toads.

Petreus says the powder of Toads dry'd in an Oven and Calcin'd, being given to half a dram in Wine or any Liquor, will pass the Hydropical Water by Urin. He alledges the first Inventer of this Remedy design'd to kill himself by the Experiment, and found his Expectations frustrated by a Cure. For my part I believe 'tis of little use, because the chief Vertue of Toads, lies in the Volatil Salts, which the Calcination disperses. Therefore I would rather dry the Toad in a moderate heat, or at least, if it must be dry'd in an Oven, put it into a close Vessel, that so the fugitive Salts may be kept in.

A Cerote of Toads from Riverius.

Take two pound of Toads, a pound of Oyl, half a pound of Wax; boyl them in a close Vessel well luted, till one half be consum'd. Then make a Cerote to be spread upon thin Leather, and applied to the Spleen and Kidneys.

C H A P. XXX.

Of Lithontriptics, or Medicines which dissolve the Stone.

Those who confound Lithontriptics and Diuretics will think this Chapter superfluous. But, if they consider that all Diuretics do not push out the Stone or Gravel; and many things which dissolve the Stone do not pass by Urin: This consideration will oblige 'em to own that a separat Chapter for Lithontriptics is very proper. This thought may be further confirm'd by considering thac the Spirit of Nitre, which is not more Diuretic than that of Salt, Sulphur, or Vitriol, is nevertheless more qualify'd for dissolving the Stone. The following Experiment will vouch for it. Take Gravel or a Stone out of a Man's Bladder, pour upon it the Spirit of

The Difference of Lithontriptics & Diuretics.

Salt, Sulphur, or Vitriol: 'twill not raise so great a Fermentation, nor dissolve the Stone so effectually, as Spirit of Nitre, which keeps up the Fermentation till the Stone become soft. Thus we see there's a great difference between provoking to make Water, and dissolving the Stone.

*The use of
Diuretics.*

I grant, all Diuretics pushing the Urin through the Kidneys may wash off the Gravel they meet with: But then they do not reach the Cause that hatched it; but on the contrary enlarge the passages and strike out a better lodging for the succeeding brood, which renews the Tragedy, and calls up the pain again.

For this Reason many Diuretics are improper in the Gravel. Oftentimes they drive it too impetuously upon the parts it has already over-run. 'Tis true we ought to endeavour to bring down the Gravel, pacify the pain, and push out the Urin. And indeed Diuretics are qualified to produce these effects. But then they must not be continu'd, else they do more harm than good. At least if we be for Diuretics, we must cull out such as are appropriat to the Gravel, namely the preparations of Nitre, Soluble Tartar, the Volatil Salt of Tartar, Wood-lice, the preparations of Beetles, Roots of good Henry, Water of Walnuts, Saxifrage, &c. But we must be careful to avoid Acids such as the Spirits of Salt and Vitriol, Cream of Tartar, &c. and such Alkalies as put the Humors into violent motions, namely the Aperitive Roots, Winter Cherries, Butchers broom, &c. Some alledge a Goats Blood prepar'd is infinitely useful in this case, especially if the Goat was fed upon herbs proper to the purpose. Some Antient Authors tell you this Blood will dissolve Diamonds, which they thought neither Fire nor Hammer could command: But rheir advances upon that Score are justly reckon'd fabulous.

The best way to prevent the breeding of the Stone, and Nephritic Colics, is to tye ones self up to a strict Diet; to avoid all Acids or whatever turns quickly sowre, as Milk; and whatever breeds either
Phlegm

Phlegm or Wind. Some pretend, *Paveira Brava* or the wild Vine of Mexico administred in Powder in White-wine, the bark of Calthrop Roots, Lime-water and its Liquor are very serviceable on this occasion. In the mean time I think it scarce worth the while to annex a List of the Medicines belonging to this Head, or their particular forms.

C H A P. XXXI.

Of Hysterical Medicines.

'T Were easy to prove that a Ferment is strain'd out from the Glandules of the Womb, and Womens Testicles; which in time may become over-Sharp, over-Corrosive, too plentiful, or, in fine, too active. Sometimes it may Stagnat in the Blood, and not come forth at all, in which case it may cause many disorders.

The Cause of Hysterical Passions.

Sometimes it galls the Nerves of the Matrix, and throws the whole Body into extraordinary Convulsions. Sometimes it joyns in with the Blood, and causes Obstructions in the Brain, which unbend the Nerves, and sink the sense and motion of all the parts. In fine 'tis the Author of all the Symptoms commonly imputed to Vapours, and retaining to Hysterical Passions.

Various disorders.

When the Hysterical fit comes on, we are wont to apply to the Nostrils strong smelling Medicines, such as the Spirit of Urine, *Affafetida*, Oyl of Paper, Gum-Ammoniac, black Oyl of Amber, Queen of Hungaries Water, and in short whatever gives a piercing smell. The Reasons vouching for this Practice are intimated above.

Remedies for the Fit.

Inwardly we exhibit Volatil Remedies capable to

Internal Volatil Medicines.

Volatilise the Ferment, and take off its Sharpness, such as the Volatil Spirits of Sal-Ammoniac or Urin in some Convenient Vehicle; the Volatil Salts of Amber, Vipers, Tartar, Sal-Ammoniac, Urin, white Oyl, the Water or Tincture of Cinnamon, Camphir, Spirit of Wine Camphoris'd, &c.

*Medicines
proper
when the
Fit is over.*

When the fit is over, we must go in quest of the Causes. If the Ferment be too coarse to be regularly strain'd out, then we administer Mugwort, Feverfew, Baum, *Elixir Proprietatis* in a convenient Vehicle, the Tincture of Myrrh, Castor and Saffron, Spirit of Wine Camphoris'd, and most of the above-mention'd Remedies.

If the Fit be occasion'd by a violent agitation of the Ferment, and the over-Volatil Disposition of its principles: Then we exhibit the Acid Spirits, such as the Dulcified Spirits of Salt or Nitre, Spirit of Sulphur or that of Vitriol, to the quantity of seven or eight Drops in a Glass of Water every Morning; together with *Sal-Polychrestum*, the Salt of Sulphur, Crystals of Tartar, &c.

A List of Hysterical Medicines.

Mugwort, Feverfew, Wormwood, Baum, *Avens*; in *Ptisanes* or *Glysters*.

Amber, Cinnamon, Cloves; from a scruple to a Dram.

Castor; from six to twenty grains.

Saffron; from one to two Scruples.

Camphir; from one to Three grains

External Medicines.

Burnt Paper or Rags applied to the Nose, Assa Fetida.

Chymical Medicines.

For External use.

Spirit of Urin, Oyl of Paper, Gum-Ammoniac, Amber, and Queen of Hungaries-Water.

For

For Internal uses.

The Volatil Spirit of Sal-Ammoniac and Urine ; from six to eighteen drops.

The Volatil Salts of Amber, Vipers, Sal-Ammoniac and Urin ; from four to fifteen drops.

The Rectified Oyl of Amber ; from one to six drops ; dissolv'd in some convenient Liquor with Sugar or any other separating Body.

Cinnamon Water or its Tincture ; from one to two drams.

Elixir Proprietatis ; from six to twenty drops.

Tincture of Myrrh ; from six to twenty drops.

Tincture of Saffron and Castor ; from 4 to 15 drops.

Acid Spirits added to Fuleps, to an agreeable Acidity.

Sal-Polychrestum ; from half a dram to three.

Salt of Sulphur ; from ten to 40 grains.

The Forms of Receipts.

Pessaries are improper for Virgins. They are commonly prescrib'd for Experienc'd Women, and season'd with some sweet smelling Ingredient, such as Musk, Civet, &c.

A Water against Fits of the Mother

Take the Waters of Feverfew or Mugwort, of each two ounces, Tincture of Cinnamon, half a dram, Myrrh, eight drops, Castor, six drops ; mix for a draught.

Another.

Take of the Decoction of Mugwort, three ounces ; the Volatil Spirit of Sal-Ammoniac, twenty drops ; let the Patients drink it up in a Morning fasting.

C H A P. XXXII.

Of the Medicines which provoke to Love.

Sometimes a Man is naturally Cold, incapable to beget Children, or to do right to his Wife; He is troubled in mind, and in effect finds his Codpiece point so bewitch'd, that he cannot oblige his Wife with the proofs of his Manhood. In this Case 'tis a Physicians part to find out Remedies to amend the Indisposition.

*A Pre-
caution.*

'Tis true these Remedies may be ill used. Old Letchers thinking to improve their prowess, and young Gallants willing to merit their Misses goodwill, do oftentimes misapply those Medicines, which serve only to call up and disperse the Spirits. 'Tis by such means that the Old Man is so soon shatter'd, and the Young Man exhausted upon too frequent Embracings. 'Tis the abuse of such Remedies, that Murders their temperament, and throws 'em into diseases and pains infinitely more cutting than the pleasures were charming.

*Medicines
procuring
Seed.*

All Remedies augmenting the quantity of Seed, are richly stock'd with Oyly and Volatil parts. But in administering them, a nice regard must be had to particular temperaments. The same Remedy that spurs up one Man to lust, will sink the appetit in another. And if we may Credit a Book, entitled, *Le Tableau de l'amour*, &c. Lettuce and Succory which extinguish amorous thoughts in most Men, have that influence upon some that they egg 'em on to Nocturnal pollution. The same Book tells you the like story of Ginger and Pepper; and gives this Reason for the

Influence

influence of Pepper, that when it finds the Blood in repose, it puts it into motion, and occasions a plentiful filtration of Seed. As for the Experiment of Lettuce; 'tis certain, when the Blood is very fine and subtil, it quickly disperses and affords but little Seed: Now this indisposition of the Blood is amended by Succory and Lettuce, and so the Spirituous parts are kept in, and reserv'd for the Supplies of Love.

Some Victuals afford Oily and Subtil parts for the Breeding of Seed; and are infinitely preferable to any other Medicines. Such are sweet Wines, Yelks of Eggs, The Stones of a Cock, Crabs, Marrow or Pith of Beef-bones, Satyrion, Parsly, Artechokes, *Sesely*, &c. Such things as are only possessed of Volatil parts ought to be avoided. 'Tis true, they are strong Incentives, but then they dissipat the Spirits extreamly. And therefore we prohibit the preparations of Ambergris, and almost all Remedies whose Oyls are very Volatil, such as Nutmegs, Mace, Cloves; the Essences of Rosemary, Thyme, Lavender, Cinnamon; the Spirit of Cresses; and, in a word, all such Medicines as spur up the ejaculation of the Spirituous Sperm, without contributing any thing to enlarge the Stock. Perhaps they may heighten the pleasure; but then 'tis with a Vengeance. Hence we may Conclude, Physicians are out in prescribing Spanish Flies, Borace, Skirrets, small Crocodils, and Common Salt; because they only Tickle the Parts. 'Tis likewise to be observ'd that even those which furnish Store, as well as Incite, are not always proper for all Persons, because they tend to the encouragement of Vice.

Medicinal-food.

A List of Incentives to Love.

Sweet Wine. Yelks of Eggs. A Cocks Stones. Crabs. Marrow or Pith of Beef-bones. Satyrion. Parsly. Seleri. Artichokes. Chocolar.

Ambergris;

Of the Medicines which Extinguish

Ambergris ; from one to four grains.
Nutmegs ; from one to two scruples,
Cloves ; from a scruple to a dram.
Cinnamon ; from a scruple to a dram.
Rosemary. Thyme. Lavender. Skirret. Borace.
Spanish Flies.

Chymical Medicines.

Essence of Ambergris ; from two to six grains.
Oyl of Nutmegs ; from four to ten grains.
Oyl of Cloves ; from one to four grains,
Oyl of Thyme ; from one to six drops.
Oyl of Lavender, the same.
Essence of Cinnamon ; from one to four drops.

C H A P. XXXIII.

Of the Medicines which Extinguish Amorous thoughts.

The different effects of Medicines.

THE Medicines which Extinguish Amorous thoughts perform their office by lessening the quantity of Seed, and fixing its Volatil or Volatilising the Oily parts.

'Tis certain, that fatigue of Body or Mind, Fasting, feeding upon Cold or unjuicy Victuals, are proper means to check Amorous thoughts. And yet I know some Persons that never Fast or study much, but they fall into Nocturnal Pollutions in the Night-time. Probably because the Blood moving more Violently, furnishes more Volatil Spirits which Ferment the seminal Liquor.

The Medicines of this Rank, are either compounded of such parts as check the motion of the

the Blood and Spirits ; or of Volatil Salts with a small quantity of Oyl, which attenuat the Oily parts of the Seed ; and fit 'em for Transpiration.

Those which fix the Volatil parts of the Seed are, most Acid Spirits, soure Citrons, red Gooseberries, the four Cold Seeds both larger and lesser ; and above all Water Lillies, its distill'd Water, or Root boyld in Ptisanes ; sometimes we make Syrup, Conserves and Liniments of this Herb, but in the two first preparations the Sugar lessens its vertue. Hemlock is also very proper, providing it be given in a small quantity, because experience tells us, a large quantity will disturb the mind, and occasion many disorders.

*The In-
crassating
Sort.*

Hot Remedies operat by cutting through the Oily parts of the Seed, and evacuating them by Transpiration. Perhaps they likewise dispel the Wind which sometimes rarifies the Seed. Such are the Chast Tree, Rue and Camphir. They are very successful, and are so much the more esteem'd, that they do not occasion such coldness and pains of the Stomach, as Acids or cooling Medicines.

*The At-
tenuating
Sort.*

To this account we may add the Preparations of Lead. That Mettal applyed to the *Perineum* cramps the Fermentation of the Seed, and Fetters its Spirits. The Sugar of Lead taken in Water pacifies the panic fancies of Timorous Creatures. In the mean while 'tis worth the taking notice, that we must not always be severe in checking Amorous designs, lest we injure the Persons health, by destroying their Temperament, and changing the disposition of the Blood and Humors.

*A Cau-
tion.*

A

A List of the Medicines that Ex- tinguish Love.

Citrons.

Red Goose-berries.

The four Cold Seeds.

Water-Lillies.

Juice of Hemlock; from half a dram to two.

Seed of the Chast-Tree; from a scruple to a dram and a half.

Seed of Rue; from half a dram to four scruples.

Camphir; from one to four grains.

Chymical Medicines.

Water of Water Lillies; from half an ounce to three.

Lettuce Water; from two to six ounces.

Spirit of Wine Camphoris'd; from six to twelve drops.

Acid Spirits in Ptsanes or Zuleps, to an agreeable acidity.

Sugar of Lead in the Water of Water Lillies; from one to six grains.

C H A P. XXXIV.

Of the Remedies which Increase or dimi- nish Milk.

Milk is the Chyle filtrated through the Breasts for the nourishment of the Child. Married Women are not the only proprietars of Milk.
Maids

Maids and some Men, if they squeeze their Breasts, will void a sort of *Serum*, not much different from Milk. I remember to have read of a Girl that giving the Bubby to a Child to play with, saw true Milk come out of her Breasts. However, 'tis not my business to mention such Remedies as procure Milk to Maids; what I now design, is to produce the Remedies which furnish a Wet Nurse with a sufficient quantity of Milk for suckling her Child.

Sometimes the pores of the Breasts are too strait to receive the Chyle; or else the Chyle is too coarse to enter. Both these Causes are frequently in the Case. In order to remove 'em we are wont to foment the Breast with emollient Decoctions, or anoint 'em with Oyl of Lillies. They will operate the better if we use them Hot, because the particles of fire at once dilate the Pores, and put the parts of the Medicine into a penetrating motion. For Internal use, we mingle some subtil thing with the Nurses Victuals in order to attenuat her Chyle; for example, Fennel and its Seed, Anis, Dill, Caraway-seed, Crystal, and some of the abovemention'd Aperitives.

If we mean to stop the Milk, 'twill be proper to Purge and Bleed, in order to divert the humour, and order the Woman to leave off suckling gradually. We may also apply Astringents to the Breasts, such as the Decoction of Periwinkle, Red-Roses, Pomgranat flowers, &c. But with a great deal of Caution, because they are apt to curdle the Milk. And therefore e're we come to them, 'twill be proper to prepare the Breasts by applying Dissolving Medicines, such as the Juice of Mint or Fennel with Honey, the Spirit of Wine, Urin, or the Decoction of Cresses in Urin, &c.

For Internal uses, we Exhibit cooling and thickning Medicines, and Emulsions; but avoid Aperitives. Hemlock Applied prevents the filtration of the Milk: And Sugar of Lead is useful for the same purpose both Inwardly and Outwardly.

A List of the Medicines which breed Milk.

M^{ilk} Seed of Dill, of Fennel, to a dram.
Chastree, Roman Coriander-seed; in Decoctions.
Crystal, to a dram in some Liquor.
Raisins. Pistach Nuts. Almonds. Figs.

For External Use.

Leaves of Water Plantain. Roots of Radishes.
Briony Roots to a dram in Powder.
Earth-worms.

A List of the Medicines which diminish Milk.

For External Use.

The Decoction of Periwinkle. Juice of Citrons.
Juice of Mint. Verjuice. Juice of Cresses.
Red Roses. Pomgranat flowers. Henbane. Hemlock.
Oyl of Henbane seed, by Expression.

For Internal Use.

The four Cold Seeds. Poppy seeds. Purgatives.

CHAP. XXXV.

Of Medicines against the Gout.

SINCE Physicians are commonly charg'd with Ignorance upon the score of this Disease, they ought to wipe off the Asperſion, and do right to their Honour, in giving the World to know they are not unacquainted with the Nature of the *Gout*.

The *Gouty Pains* in the Joynts are occasion'd either by the acidity or ſharpneſs of the Juice which ought to nourish the tendonous and membranous parts; and in the mean time is ſo far from performing that Office, that it galls 'em; and ſetting upon them, raiſes tumors: or elſe, they proceed from the laxity of the Pores of thoſe parts, as not being ſtrong enough to ſhake off the incumbent Juice; or elſe from their ſtrainneſs, which hindring the Juice to paſs, occasions its ſtagnation.

The Tendons and Membrans are always looſen'd and unbended, when the Juices are acid; becauſe they being then thick, do gradually enlarge the Pores, and dimensions of thoſe parts: Sometimes they cauſe Nodes, but the pain is only violent when they begin to ferment. On the other hand, if the Juice be ſharp, it beats up the Pores, irritates the part, and cauſes a violent pain; ſometimes it inflames, but without any conſiderable ſwelling.

Thus we ſee there are two ſorts of *Gouts*, requiring two different ſorts of Remedies. One with oily and intangling, the other with ſubtil and volatile parts.

In general, we may foreſee the fit a coming, when the Perſon begins to be coſtive, and the parts

The fore-runners of the Fit, to

to swell; and when the sweat and filth between the Toes begins to be scanty. When the Belly is more costive than ordinary, the sharp or acid humors which are lodg'd in the Blood, are not so plentifully voided at the Fundament; and thus the mass of Blood is over-run with heterogeneous Matter. And therefore we see Purgatives exhibited before the Invasion of the fit, do often prevent, or at least retard it. The tumor of the part takes rise from the stagnation of the humors. 'Tis well known, the sharp and acid parts of the Blood in a natural state, are thrown out by transpiration at the feet; and if so, 'tis no wonder the suppression of that Evacuation shou'd occasion violent Pains. And for that Reason Sudorifics, which push the humors to the circumference of the Body, are mightily in use in Gouty Paroxysms.

External
Pacificks.

The external pacific Medicines are, *Burdock-leaves* bruised, crum of Bread with Milk, Oyl of Worms, Opium, Henbane-leaves, Nightshade; Cataplasms of Mallows, Marshmallows, Brancursine, and Baths of the Juice of Birch.

Snails and their Shells bruised, and the distill'd water of Frogs Spawn mix'd with a few drops of the Spirit of Urine, or volatil Spirit of Sal Armoniac, are very serviceable in *Gouts* attended by Inflammations. But we must take care the volatil Spirits be not too many, lest they provoke and irritate the part. If ye please, ye may add the Powder of *Sperniola*.

Resolu-
tives.

The Resolutive Medicines us'd in the *Gout*, are Lije, Soot mix'd with Hony, the Spirit of Urine undephlegmated with the volatil salt of Urine; hot Urine, Onyons, Laurel, Sage, Gum Ammoniac, Galbanum, Storks Dung, old Cheese, Ships Pitch in Plaisters, Oyl of Wax, Brimstone, the hot sulphureous mineral Waters; Oyl of Jet and Pit Coals, Gum Caran. the urinous volatil Spirit of Tarrar, Ground-pine and Gerniander by way of Cataplain; Briony Roots scrap'd and apply'd with the Oyl of Worms and Stag-flies; the

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Oyl of Linfeed with *Euphorbium*. This last Medicine is very provoking, and apt to inflame the Pain; upon which account it cannot take place, unless the Gouty Person be free from a Fever or Inflammation. And indeed all Oyntments and oily Compositions are dangerous in case of a Fever, because they put a stop to the Transpiration for some time, notwithstanding that they afterwards promote it.

Since the Gout is frequently caus'd by sharp or acid Particles lodg'd in the part, 'twill be requisite first to apply softening pacific things, to prepare the Pores for the Resolutive Medcines that come after; for if the Pores be not open enough to give way to their dissolving force, they'll augment the Pain, as we see by the Spirit of Wine Camphoris'd; which apply'd by it self, or mingled with the Spirit of Urine, does oftentimes exasperat the Symptoms, and raise Blisters, especially in Gouts accompany'd by Inflammations.

If we mean to procure Sweat, we must avoid sharp Salts, because they joyn in with the Liquors, and gall the parts.

Sometimes we find blistering Plaisters will give relief in acid Gouts: Perhaps the Pain occasion'd by 'em, eclipses the sense of the other; or else the sharp salt of the *Cantharides* mitigates the prevailing acid. For 'tis not probable the water evacuated by them shou'd be the humor concern'd in the Disease, since it comes by the Ulcers of the Skin.

The Effect
of *Cantharides*.

To come to internal Medcines. Some doubt if Bleeding, Purging, or Sweating are proper.

Bleeding.

Bleeding gives relief, when sharp salts prevail; for by diminishing the quantity of Blood, it empties the Vessels, and makes room for the ready Reception of the Corrosive, Particles that lye out, and gall the Membrans. But then 'tis to be fear'd these salts being thus mix'd with the Blood, should in the course of Circulation fall in with some Bowel, and occasion those Disorders which we com-

menly tack to the Gout struck up; and are very frequently met with.

However, this should not scare us altogether from bleeding, especially in Inflammation *Gouts*, providing we ply at the same time both inwardly and outwardly, with Medicines fit to promote Transpiration.

Purgatives.

Most Purgatives exasperat Gouty Pains, because they evacuat a great deal of the Serum that might dilute the sharp salts; and therefore when the *Gout* is occasion'd by sharp salts, especially towards the invasion of the fit, we must be very cautious to avoid Purges. Indeed at a considerable distance from the fit, Purgatives may prevent the Conjunction of the Salts in the first Passages with the Blood. But towards the Paroxysm 'tis to be fear'd the Salts being then exalted, and put in motion by the Purge, should gall the parts they visit by the way. Upon which account, I take it, *Rhumelius*, and several other noted Practitioners, are wont to joyn Opium to Purgatives on such occasions.

Note, When we mean to purge Gouty Persons, we ought first to moisten and qualify the humors, and then exhibit the strongest Purgatives capable to bring away the saline Particles with the moisture; for their Blood being commonly acid, they are very hard to work upon.

Sudorifics.

Internal Sudorifics are always sure to stir up the Salts, but do not always procure sweat; so that sometimes they do a great deal of harm. If they are at any time proper, it must be when the *Gout* is occasion'd by an acid humor: because they, being well stock'd with Alkalis, and volatil Sulphur, may qualify the Acids that give rise to the Disease. Upon this design we imploy Guaiacum, Sarlaperrilla, Sal Armoniac, &c. But the external Sudorifics do always answer best. They do not disturb the humors much, but softly open the Pores of the skin, and make way for the corrosive Particles which gnaw the Joynts. Liquid Sudorifics are always preferable to the dry. And accordingly, 'tis better

better to procure Sweat with the steams of hot Water, than with Fire it self, because the moist Vapors at once unbend the Pores, and dilute the Salts that are lodg'd near the surface.

Sometimes we are forc'd upon Narcotics (inwardly) to appease the violent Pain; but there needs a great deal of Caution and Judgment in the case. Narcotics.

Milk is mightily cryed up for Gouty Persons. But if the first Passages are foul, 'tis apt to turn soure, and does a great deal of Mischief. In short, it always exasperats the Gout proceeding from acid humors. Indeed it gives relief where the Gout springs from sharp Salts, because it inveigles 'em with its Oily parts. But then the Person must confine himself intirely to a Milk Diet; and besides, he must purge now and then, and take all the cautionary Measures imaginable to prevent its curdling. At first let him take about half a Pint in the Morning, and as much at Dinner. Some days after let him only eat once a day, and at length feed upon nothing but Milk. If he means to quit it again, he must observe the same gradual Measures; that so the ferment of the Stomac may have a time to change its Nature. Goats Milk is preferable to all others, by reason of its Balsamic Parts. Besides Milk, in the case of sharp Salts, we may administer inwardly the water of Frogs Spawn, Broth of Crabs, water of Snails, and the volatil Spirit of Soot; and to prevent the fit, the Pulp of Cassia mixt with the Syrup of Peach Flowers.

In the case of acid Salts, we administer the Decoction of Tamarisk and Ash-barks, Tea, Sage, Germander in Powder; the volatil Spirits of Sal Armoniac, Tartar, &c. To prevent the Fit, sweet Mercury, Jalap, and Aloes, are the best Purgatives: The first two may be mix'd with Salt of Tartar, and the last with Opium, especially during the time of the fit.

Of Med'cines against the Gout.

To prevent the Paroxysm, *Tachenius* recommends the Ashes of Cephalic Plants to be put about the Feet, and frequently renew'd, in order to facilitate the Transpiration. He tells you, these Ashes will abate the swelling that oftentimes follows Gouty Pains.

When the Fit is over, that is, when the Pain and Fever disappear, and that the Patient is cruelly troubled with such a weakness, that he cannot stand upon his Legs without pricking Pains, like the Pricks of so many Needles; then he recommends a Plaister made of a pound of Oyl of Roses, a quartern of Soap, three Ounces of Minium, and as much Ceruis: These he orders to be boyl'd and carefully stir'd; and towards the end adds an ounce of Camphyr reduc'd to Paste with Spirit of Wine. This Plaister must needs be an excellent thing.

A List of Remedies against the Gout.

Urine drunk in the Morning fasting.

Milk taken by way of Diet.

Jalap, from one to two Scruples.

Rhubarb, from one to four Scruples.

Aloes, from a Scruple to a Dram.

Hermoadyls to a Dram.

Turbith to a Dram.

Peach Flowers, by way of Syrup or Decoction.

The Decoction of Cassia to a Pint, and continued.

China,

Guaiacum,

Sassafras,

Sarsaparilla,

Tamarisk Barks,

Ash Barks,

Germander,

Ground Pine,

Sage,

These,

} In Decoctions.

Opium,

Opium, from half a Grain to a Grain.

For External Use.

Burdock-leaves bruised and apply'd.

Hot Urine.

Onions pounded.

Cantharides in Plaisters.

The Leaves of Henbane.

Poppy.

Opium.

Oyl of Henbane.

Bagnio's.

Tachenius his Plaister.

Water of Frogs Spawn.

Briony Roots with Oyl of Linseed.

Euphorbium with Oyl of Linseed.

The Ashes of Cephalic Plants.

Chymical Preparations.

The Spirit of Soot to half a Dram.

Volatil Spirit of Tartar to thirty drops.

*Sal Armoniac, and Salt of Tartar melted separately
in Water, of each ten Grains.*

*Extract of Juniper, from half a Scruple, to half a
Dram.*

Rosin of Jalap, from four to ten Grains.

For External Use.

Oyl of Turpentin.

Spirit of Wine.

Queen of Hungary's Water.

Spirit of Urine.

*The Forms of Receipts.**A Liniment.*

Take of Quicklime half an Ounce ; Soot, an Ounce ; common Honey, two Ounces ; Make a Liniment.

Another.

Take Sal Armoniac, and Salt of Tartar, of each equal parts ; dissolve 'em in fair Water, and apply it often with Rags.

Paracelsus his Arthritic Powder.

Take Hermodactyls, Turbith, Diagrydium, Sena Leaves, Scrapings of Man's Scull, and Sugar, of each an equal quantity. Dose, from half a Dram to two Scruples.

C H A P. XXXVI.

Of Remedies us'd against the Piles.

WHEN the Blood lingers long in the Vessels of the straight Gut, and does not circulate as it was wont to do, it enlarges the dimensions of the Vessels; and for as much as they are divided into so many Cells, causes several Tumors, some within, and some hanging out of the Gut. Those which are lodg'd within, come often out with the Excrements, and sometimes carry something of the Membrans of the Gut along with 'em.

If the Membrans of the Vessels are not strong enough to resist the redundancy, sharpness, and of their motion of the Blood, they burst, and cause a Flux of the Piles; which is sometimes accidental, sometimes periodical, and sometimes critical. When 'tis periodical or critical, it ought not to be stop'd, unless it exceeds measure.

Sometimes it falls out, that the sharpness of the Blood causes not only a Flux, but Fistula's and Ulcers in the adjacent parts.

To obviate all these Inconveniencies, 'twill be requisite to make use of such Remedies as extinguish the Fermentation, and retrieve the liquidness of the Blood. Inwardly we exhibit Decoctions mix'd with Vulneraries, such as Crabs Eyes prepar'd, Bezoar mineral, Pearl and Coral. Bleeding will not be improper. In the mean time the Person must avoid Wine, hot Food, Motion, &c. that the Liquors may have the less Shock upon the Vessels.

These

General Remedies.

These General Rules will hold both for the dry and wet *Piles*.

How to
open the
Piles. Oftentimes *Piles* rise up in Swellings, because they were wont to run, and now the Membrans being occasionally harden'd, are not able to force their Passage. In that case the Pain, and other accidents, oblige us to open 'em. This we endeavour to do, first by fomenting 'em with emollient Decoctions, and then applying the Juice of the Herb Mercury. If these prove ineffectual, we apply the Milk of the Fig-tree, or its Leaves bruised, or the Juice of Sowbread with that of Beets and Onyons, Briony Roots, &c.

But considering all these Medicines are sharp and apt to raise Inflammations, therefore we choose to apply Leeches. If the Blood lodg'd in the Swellings be very gross, and of a long standing, Leeches are to little purpose. And in that case Scarification is absolutely necessary; and if the Tumors be very large, we may clip 'em off with Cissars, applying afterwards Pledgits and Tents dip'd in some Styptic Water.

Emollient
Pacificks. If the Swelling be but small, and yet attended by violent Pain and Inflammations, then softening Pacificks are of excellent use. Such are the Male Balsam Apple boyl'd in the Oyl of Linseed, white Mullein boyl'd in Milk, and applied hot; River Crabs boyl'd in Oyl, and beaten in a Mortar; Flaxweed boyl'd in Hogs-lard till become green, mix'd with the Yelk of an Egg at the time of using. The Berries of Garden Nightshade boyl'd in the Oyl of green Olives with Myrtle-berries, give an Oyl that softens and abates Inflammations. To these we may add the Oyntment *Populeum* with the yelk of an Egg; the Herb wild Purslain bruised and applied; the Decoction of Chamomil; the Oyl in which Woodlice or Beetles are boyl'd; the Decoction of white Mulleyn with Henbane-seeds; Juice of Housleek, Oyl of wild Mustard, with a little Ceruus and Wax to bring it to the consistence of an Oyntment: Pilewort boyl'd in Oyl to an Oynt-

Oyntment, &c. To all these Oyntments we may joyn a little Camphyr.

Above all, we must endeavor to keep the Belly loose by a cooling moist Diet, interlin'd now and then with Clysters and Purgatives. If we mean to promote the flux of the *Piles*, we may exhibit Aloes; and at the same time fumigat at the Fundament with Turpentin burnt with the Flocks that come off white Mullein. But if we design not to irritat or provoke 'em, then Cassia, and such like cooling Ingredients, are the only proper Purgatives.

If the Pain continue still, notwithstanding the use of all the above-mention'd Pacifics, we must have recourse to the Mucilages of Quince-seed, Fleawort, Marsh-mallows, Opium, the Leaves of Garden Nightshade beaten, &c.

If the *Piles* run violently, and threaten a great Astringent. loss of Blood and Strength, we are oblig'd to im-
ploy Astringents; for Internal use, the water of Frogs Spawn with Crabs-Eyes, and Sugar of Lead; Amber, Syrup of dry'd Roses, Purslain-water, Juice of the stinging Nettle, Juice of Plantain, Juice of Knotgrass, the Decoction of Mastic-wood, Cinquefoyl, and Yarrow. For external use, the Powder of Wolf's fist, the Leaves of white Mulleyn boyl'd in Blacksmith's Water; the Ashes of Cork mix'd with the Oyl of Myrrh; the Ashes of Galls mix'd with the same Oyl, and applied with Cotton. We may likewise make use of the Ashes of Toads and Frogs; the Sympathetic Powder, and the Styptic Water, both inwardly and outwardly.

To conclude, we may apply to the *Piles*, the Powder of Ashwood, the Juice of lesser Celandin (which is also Serviceable against deaf *Piles*) the Decoction of Periwinkle, &c.

If the Tumors be ulcerated, we apply the Balsam of Sulphur Terebinthinat, either by it self, or mix'd with the abovementioned Emollients; to which we may joyn some Vulneraries, such as Calami-
Vulneraries.

Of Remedies against the Piles.

Calamitar Stone, Litharge, Irish-slate, &c. in fine Powder. Vulnerary Decoctions may be injected by way of Clysters, if the Ulcers spread much inwards; to which we may add the salt of Wormwood, Tartar, and *Lapis Medicamentosus*.

While the Piles are open, if we mean to purge, we must administer Rhubarb, Myrobalans, and double *Catholicum*. Sometimes when a *Tenesmus* attends them, sweet Mercury joyn'd to Rhubarb is very serviceable.

Resolutive.

If the Blood continue long in the Tumors without running, 'tis dangerous to discuss 'em; because the Blood by its stay becomes sharp, and tinctures the whole Mass of Blood with the same Acrimony. If the Tumors are recent, we may safely endeavor to discuss 'em by applying Snails, Oyl of Boxwood (a noted Anodyn,) *Naveus* and Rapes roasted under the Embers, and applied hot; *Aurum Fulmians* with the Oyl of sweet Almonds, &c.

A List of Remedies in use against the Piles.

Emollients.

<p>Hemlock, White Mulleyn, Leaves and Flowers of Elder, Leaves of <i>Bella dona</i>, Leaves of Orpin, Leaves of Housleek, Pilewort, Lesser Celandin, Henbane, Camomil, Poplar Buds, Garden Nigbshade,</p>	<p>} } } }</p>	<p>Boyl'd in Milk, Boyl'd and applied. Boyl'd in Water.</p>
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The

*The Balsam Apple,
Woodlice,
Flaxweed,
Stag-flies,
Yelks of Eggs,
Mucilages,
Leaves of Morel,
Opium,*

Boyled in Oyl of Linseed.

Internal Astringents.

Purslain Water, } To four Ounces.
Water of Frogs Spawn, }
Crabs Eyes } To a Dram.
Prepar'd Amber, }
Diaphoretics, } To ten Grains.
Sugar of Lead, }
The Styptic Salt, }
Juice of Plantan, } To two Ounces.
Juice of Knotgrass, }
Juice of the stinging Nettle, }
Syrup of dry Roses to an Ounce.

External Astringents.

Wolf's fist in Powder.
White Mulleyn boyl'd in Smith's Water.
Ashes of Toads.
Ashes of Frogs.
Ashes of Cork.
Ashes of Galls.
The Decolition of Periwinkle with Styptic Water.
Powder of Ashwood.
Sympathetic Powder.

Resolutives.

Snails, }
Oyl of Beetles, } Applied.
Oyl of Boxwood, }

Rapes

Of Remedies against the Piles.

Rapes roasted and applied hot.

Cataplasms of Emollient and Discurssive Plants applied hot.

Remedies which open the Piles.

Juice of Sombread.

Milk of the Fig-tree.

Juice of Onyons.

Roots of Cuckow-pint.

Briony Roots.

Aloes.

Coloquintida.

Leeches.

Scarifications.

Emollient Pacific Vulneraries.

Groundsel,

Camfrey Roots,

Elder Leaves and Flowers.

Crabs boyl'd in Oyl, and beaten in a leaden Mortar.

Balsam of Sulphur Terebinthinæ.

Litharge,

Ceruss,

Calaminar Stone,

} Boyl'd in Water.

} Pounded and mix'd with
Oyntments.

Forms of Receipts.

An Emollient Oyntment.

Take a quartern of the Oyl of Linseed; boyl in it as much as ye can of Flaxweed chop'd, and three dozen of Beetles; strain it out, and add two Yelks of Eggs boyl'd hard, and three drams of Wax. Make an Oyntment.

A Vul-

A Vulnerary and Astringent Decoction:

Take a handful of Periwinkle, and as much Yarrow; boyl 'em in a Pint of Water; strain out the Decoction, and add a handful of red Roses, and an Ounce of Styptic Water. When the Tincture of the Roses is extracted, strain it again, and apply it to the open *Piles* that run too much.

O F

O F

MEDICINES

F O R

External Disorders.

P A R T. IV.

C H A P. I.

Of Anodyns.

THE most common and considerable Symptom of all Diseases is Pain. It accompanies all Inflammations and Tumors. It attends Wounds and Ulcers, as well as Fractures and Dislocations. Upon which account, before I enter upon the Remedies of External Disorders, I thought fit to premise a Chapter of those which remove Pain.

Pain is occasion'd by the violent jogging and jolting of the nervous parts, which represent their Disorder to the Soul. These jolts are caus'd by sharp and acid Particles, twitching and ripping up the

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the Nerves, or by Shocks of fermenting Blood; or else by a defluxion of humors wedging in among their Fibres. The more the nervous parts resist the shock, the greater is the Injury they receive:

And therefore we find Physicians give in Emollients as Anodyns. Such as Mallows, Marshmallows, Melilot, Camomil, white Lilly Roots, seed of Fenugrec or Lint, sweet Almonds, Oyls, Tat, &c. They not only tie up the sharp or acid humors with their mucilaginous parts, but likewise soften and unbend the nervous parts, and consequently abate the force of the shock; for an impulsive motion is sooner wasted upon a soft plyable Body, than upon any thing that's stiff and rebounding.

Emollients
are Anodyns.

Indeed most of these Remedies are so unpalatable, that they are not fit for Internal use. Milk, Oyl of sweet Almonds, and fat Broth, may be taken inwardly; Oyl of Walnuts we administer in Clysters; Linseed and Syrup of Marshmallows in Pilsans; to the internal account we may joyn Gum Tragacanth, Gum Arabic, Mucilages of Quinces, Fleawort seed, yelks of Eggs, and Narcotics.

Internal
Remedies.

Outwardly we apply the Oyls of Camomil and Melilot; the Decoction of Mallows and Marshmallows; the Cataplasms of these Plants, mix'd with Meal and Linseed, Fenugrec, and the fat of Geese, Hens, Veal, or Stags; the Oyl of Roses, Frogs Spawn, Snails, &c.

External.

Sometimes we are oblig'd to apply Narcotics, such as Henbane and Opium. I have already explain'd their way of operating, and therefore shall now take leave.

A List of Anodyne Remedies.

For External Use.

Mallows, Marshmallows, the Herb Mercury, Pelitory of the Wall, Brancursin, Violets, Camomil,
Q q White

White Lily Roots, Fenugrec and Linseeds, in Decoctions or Cataplasms.

Oyl of sweet Almonds, Oyl of Walnuts, Fresh Butter, Fat, Stags Fat, Man's Fat, Crum of Bread, Milk, Eggs, Narcotics; in Oyntments, Liniments, and Cataplasms.

For Internal Use.

Oyl of sweet Almonds, with a little Sugar; Oyl of Olives, with some Syrup; Marshmallow Roots; Linseed, Mucilage of Fleawort, Oyl of Eggs; Narcotics, Sweet Almonds, the four cold Seeds clean'd.

Forms of Receipts.

An Anodyn Cataplasim.

Take a pound and a half of white Bread in Powder. Pour upon 'em a pint of Milk. Boyl it, adding two yelks of Eggs, and an ounce of the Oyl of sweet Almonds.

C H A P. II.

Of Astringent and Repelling Med'cines.

The Use
of Astringents.

THE *Repercussive* or Repulsing Med'cines are those which hinder the stagnation of humors in any part, and oblige 'em to retire to their Vessels. For recent Wounds and Defluxions they are very proper, because they retrieve the firmness of the part, and prevent the Fermentation and Corruption of the humors. But if the Defluxion or Wound be of any standing, they ought to be avoided; because the part being lank and quite destitute, they prevent the approach of the Blood and Humors, and at the same time throw back the corrupt Humors that nestled in the part; which
mixing

mixing with the Blood, continue their Fermentation and Corruption, and so occasion a Fever. If the Humors do not return to the Blood, then these Medicines hinder their dissipation, and likewise retard the re-union of the flesh by keeping off the Blood.

In the Repercussive Catalogue we reckon up cold Water, Vinegar, Water mix'd with Vinegar, Pomgranats, Juice of Citrons, Acacia, Hypocistis, Verjuice, the Solution of Nitre, the Spirit of Nitre, Allum, Spirit of Allum, and all acid Spirits mix'd with common water; which sting the nervous Parts, and cause a Contraction of the fleshy Fibres, obliging the Humors that cannot be dispers'd, to retire to their Vessels. There are other Astringents more massy and earthy, which likewise shut up the Fibres, but after another manner; most of 'em are richly stock'd, either with Sulphur, or earthy Particles; and 'tis probable they shut up the Pores where the subtile parts were wont to make their escape; thus they oblige 'em to stay and contract themselves. Such are Bole Armoniac, seal'd Earth, Horse Dung, Incense, Housleek, Snakeweed Roots, Cinquefoyl, Roses, Knotgrafs, Red Wine, *Crollius* his *Lapis Medicamentosus*. Besides the above mention'd manner of Operation, these Remedies do also imbibe the acid humors which weaken'd the part, and so fortifie it indirectly. Those which abound in Sulphur fetter and tie up the acid parts, and thus invigorat the part, and enable it to repulse the humor to its Vessels.

The Medicines now mention'd are not only Re- Bleeding, pulsive, but Astringent, and good to stem bleedings. Some bind up the fleshy Fibres, encompassing the blood Vessels, and so keep in the Blood; others mix in with the blood, and cast up a Bank to withstand its shock; they likewise defeat the congealing acids, and so retrieve its Circulation; and consequently its departure from the part. Besides these two sorts of Medicines, there are others which burn the ends of the Vessels and adjacent

parts, and close 'em with an *Eschara*: Such are white Vitriol, *Lapis Infernalis*, &c. But such Remedies ought not to be us'd but in the last Extremity; for sometimes, after all the pains and trouble, the Crust will fall off, and by giving way to the Blood, renew the former Tragedy. And therefore 'tis better to shift 'em for Styptic Remedies which twich and contract the Fibres.

'Tis worth the while to remark that Bole Armeniac does not ferment with the Spirit of Vitriol; but Lemnian Earth does. And yet when they're externally applied, their Vertues are not much different, because they both operat only by mixing with the Blood, and casting up a bank, so to speak. So that it seems the only difference lyes in this, that the one has been more expos'd to the *Air* than the other.

Chyrurgical means.

The Remedies now mention'd, may be render'd more effectual, in being back'd by Surgery. When we mean to stop bleedings, we must tye on Ligatures and Bondages, if the situation of the part will admit of 'em. Some parts indeed cannot be so treated, as in the case of bleeding at Nose, and spitting of Blood. Sometimes we supply the want of bandages by holding the place with ones finger; and by many other Machines invented for that purpose.

Bandages are very serviceable to Repercussive Med'cines; but then they must be such as do not stop Circulation, nor over-squeeze the part, but only keep it tight enough to retrieve its firmness, and thrust back the humors that might otherwise continue to stagnat in the part. This sort of Bandages is most proper for the Legs, where the descending humor unbends the part, and stands in the way of its own return. Now in this case we begin the bandage in the lower part of the foot, and bring it gradually up crossways.

To divert the flux and bleeding, we may lessen the quantity of Blood and Humors in the Vessels, and turn some part of 'em off to another quarter.

'Tis

'Tis with this View that we bleed for Falls and Bruises, especially if they're recent.

A List of Repercussive or Astringent Med'cines.

Cold Water, Vinegar, Juice of Pomgranats, Juice of Citrons, Verjuice, Seal'd Earth, Bole Armeniac, Horse Dung, Housleek, Plantane, Incense, Snake-weed Roots, Cinquefoyl, Red Roses, Hemlock, Juice of Nettles, Asses Dung, Hogs Dung, Album Graecum, Allum; applyed Externally in Cataplasms.

Fullers Earth, Vitriol in Powder, Hemlock, Plaister.

Chymical Med'cines.

Colcothar, purified Nitre, Sal Prunel; dissolv'd in Water, or apply'd in substance.

Spirit of Nitre, Spirit of Vitriol, Spirit of Allum, Spirit of Sulphur.

Crollius his Lapis Medicamentosus by way of Injection, at the rate of a dram to 8 ounces of Water.

A Cataplasme for Defluxions.

Take half a pint of the four Meals; boyl them with a sufficient quantity of the Decoction of Plantan; add to it an Ounce of Fuller's Earth, and three Ounces of Oyl of Roses to be applied hot.

C H A P. III.

Of Resolutives.

Resolving Med'cines are compounded of subtil and volatil parts, which attenuat the humors, enlarge the Pores, and dissipate the matter that over-runs any part. Resolutives.

Q q 3

They

Their Use. They are us'd very successfully against Tumors caus'd by Wind or thin Humors, especially if the Skin be thin; for then they draw out the humor that gives rise to the Disorder.

On the other hand, if the humors be gross, they ought not to be us'd, because they draw out the subtil part, and leave the coarse, which cannot be duly digested by it self. If the matter be acid, and the Pores shut, they are likewise improper; for in such cases they only stir up the acid parts, and are not able to fetch 'em out.

These Remedies, if seasonably applied, prevent a great deal of Pain to the Patient. 'Tis by their means that we can often dispense with manual Operations that might put him in danger of his Life, or at least protract the Disease.

They ought always to be applied hot; because the actual fire opens and prepares the Pores, makes their active Particles more penetrating, and helps 'em to attenuat the humors.

The Use of Oyls. Oyls and Ointments are never to be imploy'd upon a discussing business, unless it be to keep in the volatil parts of another Medicine; or that the Oyls are richly stock'd of themselves with volatil Salts. These cases apart; Oily Medicines serve only to shut up the Pores, keep the matter from dispersing, and thwart its Discussion.

The Resolutive Remedies, whose Parts are active and fit to retrieve the Liquidness of the Blood and Humors, are Mint, Penny Royal, wild Marjoram, Calamint, Bay-berries, Sage, Marjoram, Hyssop, Thyme, Carrot-seed, Caraways, Tobacco, Pilewort, Lilly Roots, white Onions, the Oyl and Fat of Vipers; Spirit of Wine, the Queen of Hungary's Water; Spirit of Wine Camphoris'd, Sulphur, Balsam of Sulphur, Urine, Spirit of Urine, Oyl of Turpentine, Gum Ammoniac, *Sylvius* his Carminative Plaster; Gum Elemi, Galbanum, Bdellium, &c. *Paracelsus* cries up the Decoction of Sulphur with Urine: Both the one and the other are very proper for defeating acids, and re-instituting

instating the Blood in a liquid Condition. For the same Reason we apply the Juice of Crabs hot, the Lye of the Ashes of Vine-twigs; Water with Sugar of Lead, especially for Erysipelatous Swellings, where we mean rather to soften and purify, than discuss.

Some discussing Medicines possess coarse parts, which imbibe the acids, and split the Sulphur that hinders their Dissipation. Such are Mercury, and Oyl of Tartar.

A List of Discussive Medicines.

*M*int, Calamint, Penny Royal, Sage, Marjoram, Hyssop, Bay-berries, Carrot-seed, Caraways, Tobacco, Pilewort, white Onions, Fat of Vipers, Urine, Mercury, Sulphur, Lye of the Ashes of Vine-twigs, Lime-water; in Fomentations, Liniments, Oyls, Ointments and Cataplasms.

Gum Ammoniac, Gum Elemi, Galbannum, Bdellium, &c. in Plaisters and Ointments.

Vigo's Plaister with Mercury.

Sylvius his Carminative Plaister:

The Diaphoretic Plaister. The Plaister of Tobacco.

Emplaster of Hemloc. The Ointment Martiatum.

Oyl of Bays, Oyl of Worms, &c.

Chymical Preparations.

Brandy, the Queen of Hungary's Water, Spirit of Wine, Spirit of Wine Camphoris'd. Balsam of Sulphur, Oyl of Turpentine, Oyl of Gum Ammoniac, Salt of Tartar, Spirit of Urine.

Lemmeries Description of the Water for Gun-shots.

A Cataplasin to resolve Tumors.

Take Onions roasted under the Embers; take off their outermost Coats; beat them, and so apply. Sometimes they discuss, sometimes they bring to a head, according as the matter is prepar'd.

A Plaister to discufs the Cankers or *Lupi*
in the Legs.

Take two Ounces of Gum Ammoniac, dissolve it in a sufficient quantity of Vinegar; add an ounce and a half of Antimony in fine Powder, and make a Plaister. Sometimes it raises Blisters and draws out Water, and afterwards the Canker disappears on a sudden.

Another.

Take the Plaister of Mucilages; soften it with Mercury kill'd with Spittle; and make a Plaister to be applied for a Month, renewing it every day.

A Liniment to rub Paralytic Members with,
and to procure the Transpiration of
Rheumatic Humors.

Take the Spirit of Wine and Urine, of each an Ounce; Oyl of Bays, and Oyl of Worms, of each an Ounce and a half; stir 'em well together, and anoint the part with it, applying upon it a Hogs Bladder, with Clouts very hot.

These Oyls are added to prevent the Dissipation of the Spirituous parts; for which reason they are applied hot. The Bladder is put betwixt the Plaister and the Clouts, that they may not suck up the liquid Matter. The hot Clouts are added to promote the Penetration of the Parts.

CHAP. IV.

Of Ripening and Emollient Ingredients.

THO discussing Med'ines operat by attenuating the Humors, yet all attenuaters are not discussive.

When

When the humors are too gross and thick, we endeavour to refine 'em in order to suppuration, but not with *Discussives*; for they draw out what they attenuat, and so leave only a hard matter behind, which is not easily manag'd. Now the *Med'cines* which answer the end in this matter, must be such as keep in the volatil parts, and by that means put the grosser into a Fermentation: When they have perform'd this Office, if the humors be fine enough to retire to the Vessels, or to penetrat thro the Pores of the Skin, then they discuss: But if the humors are grosser, they break thro the Skin by vertue of their Fermentation, and come forth in the form of *Pus*.

Such are Garlic, white Onyons, Onyons roasted under the Embers, Cataplasms of the four sorts of The List.
Meal. Yest with stale Hogs Grease; Oyl of Lillies, the Ointment *Martiatum*, Oyl of Bays, Oyl of Worms, Gum Ammoniac, Galbanum, Bdellium, Storax, and most Gums; Diachylum with Gums; all Plaisters partaking of Mercury, Plaister of Soap, Incense, Gingerbread, Yest by way of Cataplasm, Sorrel boyl'd with Butter or stale Grease, &c. when the Tumor is dispos'd to break, Milk with Venice Soap boyl'd in it is very serviceable, being apply'd with Clouts, It mitigats the Pain, disperses the acids, and helps to break the Skin.

If the substance of the humor be very hard, the A Cauti-
same Remedies will still be proper, because they on.
soften by keeping in the volatil parts; only we must take care to add large quantities of Oyl, and make the Cataplasms as moist as we can, in order to unbend the Fibres, and dilute the dry harden'd humors. In the Cataplasms we may make use of Mallows, Marshmallows, Mercury (the Herb) Brancursine, Fenugrec-feed, and a great deal of Oyl.

A List

A List of Emollient Ripening Remedies.

Lilly Roots, Squills, white Onions, the four Meals, stale Grease, Oyl of Lillies, Mariatum, Oyl of Bays, Oyl of Worms; by themselves, or in Cataplasms.

Gums, especially Ammoniac. Diachylum with Gums. Stale Bacon, Gingerbread, Dung of Animals, especially Mans.

Forms of Receipts.

To bring any swelling to a head.

Take stale Hogs Grease and Yest, of each equal quantities; mix and apply them.

C H A P. V.

Of Suppurating Med'cines.

Suppuratives.

Suppurating Med'cines are such, as insinuat into the Pores of Wounds or Ulcers, and imprison the humors, till their stay and Fermentation have chang'd 'em into a purulent matter.

Their Nature.

They are, all of 'em, indow'd with oily tenacious parts; which shut up the Pores of the Wounds or Ulcers. In Ulcers their oily parts intangle the acid and sharp humors, and keep 'em from gnawing the part. They likewise hem in the subtile Particles, which being confin'd, break thro and attenuat the gluy matter that stuffs the Pores of the Ulcer.

A Caution.

In simple Wounds these Remedies are not proper; for in those cases we ought only to wash out the clotted Blood, and close the Lips of the Wound,

Wound, leaving the rest of the Work to Nature it self. Indeed if there were any heterogeneous matter, such as pieces of Iron, lodg'd in the Wound, then Suppuration would be very needful. In simple Wounds, if we apprehend they may be injur'd by the Air, we may apply some vulnerary Balsam to keep out its corrosive Particles.

We use to make a suppurative Ointment of Pitch, Oyl, and Grease; which is very serviceable for all Ulcers where Suppuration is wanted. For a Digestive we apply Turpentine with Yelks of Eggs, and some Oyls. *Diachylum* with Gums dissolved in the Oyl of Lillies, or mix'd with the Ointment of Mashmallows; and in short, all oily fat Med'cines capable to fetter or tye up the corrosive Particles of Ulcers, are proper on such occasions. But above all, the Balsam of Sulphur Terebinthinat, and the Balsam of Peru dissolv'd with Yelks of Eggs and Hony, are most esteem'd, because they both mundify and suppurat.

A List of Suppurating Med'cines.

Gums dissolv'd in Oyls, Rosins dissolv'd in Oyls or Fat; all sorts of Fat, Turpentin, Oyls, Oyl of Eggs, Balsam of Sulphur Terebinthinat; the Suppurative Ointment, *Diachylum* with Gums dissolv'd in the Oyl of Lillies; Digestives.

The Forms of Receipts.

Arcus his Liniment for Wounds and Ulcers, especially those of Nervous Parts, where Mundifying and Suppurating are equally needful.

Take an Ounce and a half of Turpentin, as much Gum Elemi, two Ounces of Goats Tallow; melt 'em. Then strain thro a Linnen Cloth, and apply.

The

The Balsam of Sulphur Terebinthinat.

Take half a pound of the Oyl of Turpentin, an Ounce and a half of the Flowers of Sulphur; a Dram of the Salt of Tartar, three Ounces of White Wine; Macerate them for eight days in some hot place; then let the Wine exhale upon a Fire of Sand, and pour off the Balsam by Inclination. This Balsam dissolves, cleanses, imbibes acids, and causes Suppuration. If we apply it to Wounds, it ought to be thicken'd by a further Evaporation. If we add Oyl of Eggs to it, 'tis better qualified for Suppuration.

C H A P. VI.

Of Mundifying Detergent Remedies.

IN this Rank there are some that only remove the acid humors which might fix the matter, and hinder Nature to breed Flesh. Others there are that remove not only the acid humors, but the superfluous Flesh. The last sort comes near to the Corrosive Medicines.

The Remedies rang'd under this head, are Yarrow, St. John's wort, Agrimony, middle Comfrey, Sanicle, lesser Centory, Wormwood, round and small Birthwort, Gentian, Myrrh, Aloes, Turpentin and Incense. All these Ingredients are capable to remove the acids that thicken the Lymph; and by virtue of their oily tenacious parts, to fetter them, and at the same time guard off the Air from corrupting the tender new grown Flesh.

The Mineral Detergents are *Chalcitis*, Antimony, Verdigris, Vitriol. The Animal Cleansers are Gall and Urine.

The

The Chymical Preparations are Spirit of Wine, Oyl of Turpentin, Crocus of Copper, Oyl of Antimony, Oyl of Camphyr, and *Aqua Phagedanica*. They operate just as the former, only are a little more active, and apt to take off the superfluous Flesh.

A List of Mundifying and Detergent Ingredients.

Leaves of Yarrow, St. John's wort, Agrimony, Middle Comfrey, Sanicle, Wormwood, lesser Centory, round Birthwort, long Birthwort; in Decoctions, Ointments, &c.

Myrrh, Aloes, Turpentin, Sugar, Chalcitis, Antimony, Verdigriss, Urine, Gall, Honey, Unguentum Apostolorum, Ointment of Smallage, Lime-water; in Balsams, Injections, Fomentations, &c.

Chymical Medicines.

Oyl of Turpentin, Crocus of Copper, Oyl of Antimony, Oyl of Camphyr, *Aqua Phagedanica*, Spirit of Wine.

The Forms of Receipts.

A Mundifying Balsam.

Take a Kessel full of the Flowers of St. John's wort, pour into it a Pint of Brandy; Let it stand eight days in the heat of the Sun, being close stop'd; then press out the Juice, and infuse into it fresh Flowers for other eight days, then press out the Juice again; and infuse into it once more fresh flowers upon a Fire of Sand for 24 hours; then strain out the Liquor, and apply it, either by it self, or with other Medicines, whether upon Pledgits, or by way of Injection.

Madam Fonguet's cleansing Balsam for Ulcers.

Take two Ounces of new Wax, two Ounces of Burgundy Pitch, two Ounces of Rosin, a Dram of Verdigris,

gris, fresh Butter six Ounces; melt first the Pitch and Wax, and afterwards add the Butter and Verdigris, stirring it well.

C H A P. VI.

Of Corrosive and Caustic Remedies.

Corro-
sives.
Caustics.

THE Detergents which gnaw and eat away the spungy Flesh, differ only gradually from Caustics. They are possess'd of sharp pointed parts, apt to cut and break thro the glutinous humors and spungy Flesh; and some of 'em partaking of the nature of lixivious salts, are qualified to imbibe and conquer the acids they meet with.

Corro-
sives.

The gnawing corrosive Med'cines are made use of for Ulcers over-run with spungy Flesh without hardness. Such are the Lye of the Ashes of Twigs, Powder of Savin, burnt Allum, burnt Brass, the Crocus of Copper, Verdigris, the red Precipitat, Oyl of Mercury, Vitriol, Colcothar, &c. Sometimes we make use of strong acids, such as the Spirit of Nitre, *Aqua Fortis* and Oyl of Vitriol, because they turn into a Crust, and their parts being soften'd are apt to carry off the other acids.

Corrosives cover the external parts of the Ulcer with a slight Crust, scarce perceivable, which keeps out the Juices; so that this Crust falling off, is very serviceable upon two accounts.

First, by this means the acid humors are sunk, which the spungy Flesh was wont to keep up upon the quick underneath; and consequently the Fibres are better dispos'd to a Union.

Secondly, Tho these Remedies do not heal up, yet by removing the spungy Flesh, they make way for it; and besides, correct the Ferments of the Ulcer.

Ulcer. 'Tis plain that lixivious Salts and Remedies of the like Character are notably qualified to destroy acid humors. And as for Savin, Verdigris, Oyl of Mercury, red Precipitat, and the like porous Medicines, 'tis easie to see that they must needs imbibe the acids they meet with. Now the only difficulty turns upon the Acids, *Aqua fortis*, Spirit of Nitre, &c. How they should conquer the acid Ferments. Indeed I believe they are better qualified for correcting sharp than acid ferments; however, they may tie up the acids by making a Crust, and dislodging them of the spongy Flesh, in the manner above mention'd.

The Effect
of Acids.

Caustics are call'd *Escharotica*, from the *Eschara* or Crust they produce. They are very proper for Ulcers whose Lips are callous, and for unripe Apothemes that ought to be quickly open'd; for the one, because they carry off the hardness together with the Crust, and dissolve and melt down the humors congeal'd by acids. And for the other, because they ripen 'em by attracting the Blood and Spirits, and joyning their own Salts in with them. In this Rank we draw up the following Ingredients; Quick-lime, the Caustic stone, *Lapis Infernalis*, Corrosive *Sublimatum*, the Caustic Oyl of Arsenic, Butter of *Antimony*, &c.

Caustics.

'Tis doubted if Cauteries may not be employ'd for other Uses. Some Physicians apply 'em to divert Defluxions, purify the Mass of Blood; and, to speak in their own Dialect, to drain the moisture of the Brain. 'Tis true, we meet with several Instances of Persons freed from Defluxions upon the Eyes, by carrying a Cautery on the Arm or Nape of the Neck: But then on the other side, both Anatomy and Philosophy evince that the Brain can discharge nothing that way: So that, the furthest we can go in this matter is, to acknowledge the Mass of Blood may discharge by a Cautery the same Ferments that otherwise were wont to fall in with the Glandules of the Eyes, or else to ferment and creat Disorders in the universal Mass.

Cauteries.

I know

Of Corrosive and Caustic Remedies.

I know some will be apt to say. How should that Ferment be strain'd out at the place of the Caution? Is not the Blood that runs there, the same as every where else? I answer, that the Caustic Medicines having made several little holes in the Skin and Flesh, do only extract such Particles as are fit to pass thro these holes. Now since the holes are made by Caustic Particles, 'tis necessary the humors that fit them should be of the same form, that is, sharp and pointed; and consequently the same that occasion'd the Disorders above mention'd.

A List of Corrosive Medicines.

Savin in Powder, Burnt Allum, Vinegar, Sea-salt, Quicklime, Arsenic, Burnt Brass, the Ointment of Ægyptiacum.

Chymical Preparations.

The Crocus of Copper or Brass purified and calcin'd.

Red Precipitat, Oyl of Mercury, Corrosive Sublimatum, Spirit of Vitriol, the acid of Sulphur, Crystals of Silver, Crystals of Venus.

A List of Caustic Medicines.

Caustic Arsenic, the frozen Oyl of Antimony, Aqua Fortis, Spirit of Nitre, Quick-lime, the Caustic Stone, Caustic Oyl of Camphyr, Crystals of Silver.

The Forms of Receipts.

A green Water that makes a thin slight Crust.

Take a dram of Kerdigris, half an Ounce of Alum, a dram of Vitriol, and as much Minium; boyl all in four Ounces of white Wine, and half an ounce of Brandy; and reserve the Lignor when it settles for use. It is good for the Ulcers of the Throat a small quantity being applied with Cotton.

Lapis

Lapis Infernalis.

Take a convenient quantity of Silver, and dissolve it in thrice as much of the Spirit of Nitre. Set 'em in Glass upon a Fire of Sand, till two thirds of the moisture be evaporated; then pour what remains into a strong large Crucible, giving at first a gentle Fire, and afterwards augmenting it, when the matter ceases to rarify. When 'tis turn'd into Oyl, pour it into a greasie Mould. This stone makes small and flat Crusts; but its Operation is quickly over. It helps to heal up. It ought to be kept in a close Vessel, because it melts when expos'd to the Air.

A Caustic that will not Melt, tho' expos'd to the Air.

Take Quick-lime and Soap scrap'd, of each equal parts; make little balls to be moisten'd before they are us'd.

C H A P. VIII.

Of Incarnating Remedies.

THE Med'cines which promote the growing of Sarcotics. Flesh, are call'd Sarcotics. The truth is, 'tis not in the power of any Med'cine to breed Flesh; all they can do, is to oblige the Blood to circulate softly in the Fibres of the Wound or Ulcer, so that some of its parts may fasten upon them. Therefore the Vertue of all the Med'cines that lye now before us, lyes in maintaining an equal Circulation of the Blood (without Fermentation or Rarefaction;) imbibing the Acids that curdle it, guarding off the Corrosive Particles of the Air that might rip

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the Texture of the Fibres, and prevent the dissipation of the natural Balsam of the part.

To answer all these Indications, we employ Medicines repleat with Alkalies, temper'd by Oyls or volatill Acids, and incorporated in large quantities of Oyl and Earth; So that all Vulneraries and Rosins will come within the Catalogue. The top ones are St. John's Wort, Comfrey the greater, middle Comfrey, Sanicle, Agrimony, Aloes, Myrrh, Sarcocol, Turpentin, Incense, Meal of Fenugrec, Vetches, Lupins, Corn, &c. All these Ingredients are at once qualified to carry off acids, and tye 'em up by their hooked intangling parts.

In the mean time we must still remember, that the Air is the chief hindrance of the Regeneration of the Flesh; and therefore if the Ulcers do not suppurat very much, they should be as seldom dress'd as possible.

A List of Incarnating Remedies.

Agrimony, middle Comfrey, St. John's Wort, Turpentin, great Comfrey; in Powder, Decoctions, or Ointments.

Aloes, Myrrh, Sarcocol, Incense, Turpentin, Balsam of Peru, Ointment of Smallage, Oyl mix'd with Wine; in Balsams or Ointments.

Forms of Receipts.

Balsam of Spain.

Take Wheat, Roots of Carduus Benedictus, Valerian Roots well pounded, of each an Ounce; put 'em into a Phial, and pour in a Pint of White-wine. Let the Phial stand on a Fire of Sand 12 hours, being close stop'd. Then add six Ounces of the Oyl of Woodlice; and let all continue in a Balneum Mariæ till the Wine be wasted. Strain out the Oyl, and add to it two Ounces of Frankincense in Powder, and eight Ounces of Turpentin. Adm. all upon a gentle Fire.

This

This Balsam is of excellent use to incarnate simple Wounds, and those of nervous parts. We first wash the Wound with cold Wine, and then apply the Balsam hot. If the Wound be in a good Condition, it is an easie matter to heal it. So 'tis no wonder some Empyrics pretend to cure a Wound by a Sword in four and twenty hours: For if the Wound be simple, if none of the great Vessels be injur'd, in a word, if there be no loss of Flesh, 'twill quickly heal without much ado. I grant these Empyrics do some service. They take out the curdled blood by sucking the Wound; and 'tis probable the Spittle and Oily Particles breath'd into it may keep out the Air, and promote the Cure; just as several Beasts cure their Wounds merely by licking 'em. But as for the forms of Words and signs of the Cross, us'd on such occasions, they have no other influence, but that of imposing upon the credulous Mob. I shall only say to tell you, this *Arcanum* or Balsam of *Spain* will certainly cure simple Wounds well dispos'd in twenty four hours; but in complex Wounds 'twill not answer.

C H A P. IX.

Of *Vulneraries*.

Vulneraries and Incarnating Medicines may seem Vulneraries to be near allied; but they are truly different, and because there are some Wounds that must be cur'd incarnate by Vulneraries, which never sustain'd any loss of ^{livesdiffer} Flesh; and some Ulcers in the Internal Parts must be treated with Vulneraries, as distinct from the Incarnating sort. Nay, even for External Ulcers, they're us'd both inwardly as well as outwardly, in order to contract and carry off the Ferment prevailing in the Mass of Blood.

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Vulnera-

The Effect
of Vulne-
raries.

Vulneraries are good in all Ulcers of the Lungs, virulent Claps, Ulcers of the Kidneys, &c. Now whatever answers these Intentions, must be capable to mortifie the acids in the Mass of Blood, and retrieve the natural Balsam these Particles had destroy'd.

This last Indication might be satisfied by Milk; but by reason 'tis apt to curdle both in the first Passages, and in the Blood, we are oblig'd to find out others to supply its room.

To conquer acids, and repair the oily parts of the Blood, we are wont to imploy middle Comfrey, Sanicle, Winter-green, great Comfrey, ground Ivy, scabious, Elecampane, St. John's wort, Speedwell, Ladies Mantle, lesser Centory, Plantain, and above all, Juniper Wood and Berries. These we convert into Pysians, Extracts, Robs, &c. All of 'em are good to soften and pacifie the Blood, by vertue of their sulphureous Particles. But if we mean to kill outright the Ferments of Ulcers, 'twill be needful to add the mineral Diaphoretics, and prepar'd Crabs Eyes to the Potions or Elestuaries prepar'd from these Plants.

A Caution.

If the Ulcers are External, and we apprehend no darger of rarifying the Blood, we may joyn to the Vulnerary Potions or Pysians Savin, whose sharp and volatil Parts are admirably fitted to conquer and sink the acid Ferments. But then take this Caution along with you. It ought always to be season'd with a quadruple quantity of the other Vulnerary Plants, together with Crabs Eyes, or Bezoar Mineral.

Sudorific Pysians of Guaiacum, China, Sarsaparilla, &c. are also not improper, especially if the Ulcer be supplied by pocky or scorbutical Ferments. In scorbutical Cases we may joyn to 'em Anti-scorbutical Ingredients.

Balsamic
Vulneraries.

Turpentin, and the Balsam of *Pern* are excellent Vulneraries both for Internal and External Use. Their Balmy Particles give a due Consistence

ence to the Blood ; and their volatil parts open the Pores, and beat out the heterogeneous matter.

Hence we may conclude, the Water for *Guns* being a Distillation of Vulnerary Plants with White Wine, cannot but be very useful both inwardly and outwardly. For the same Reason, *Quercetanus* his Clap Water must needs be very proper in Claps, Ulcers of the Kidney's, &c.

The Balsam of Sulphur Tercointhinat, is a Sovereign Remedy for Internal Ulcers, administered from 6 to 12 drops in any Liquor. For External Use we thicken it to the Consistence of an Ointment. In the mean while we must call to mind that the Balsam of Sulphur may stir up the Blood, and therefore 'tis proper to add to it Sugar of Lead, which by it self is an excellent thing for all Internal Ulcers, as well as *Poterius* his Antihectic, Antimonial Nitre, and the Narcotic Extract of Vitriol.

The rectified Spirit of Man's Blood is no contemptible Vulnerary ; it sinks the acids, and retrieves Volatils, the natural Constitution of the Blood. Mr. *Borelli* s Observations upon this Head, will vouch for its Usefulness. Mr. *Boyl* in his Experimental Philosophy, commends it against a Phthific. Montieur *le Fevre* cries up the Milk of Brimstone digested with Spirit of Harts-horn. Now the Milk or Magistery of Sulphur is prepar'd, as I intimated above, by taking a triple quantity of Salt of Tartar to the Flowers of Sulphur, and pouring on 'em 12 times as much Water as there is Salt ; then boyling all together. When the Sulphur dissolves, the Liquor becomes red, and must be filtrated. Then we add to it a few drops of the acid of Sulphur, which will precipitat a white Powder to be wash'd and exhibited for Ulcers, especially those of the Lungs ; from 6 to 16 Grains.

There's yet another noted Vulnerary behind, which I cannot pass over. 'Tis Lime-water, an admirable Remedy for all Internal or External Ulcers, especially those of the Kidney's.

We prepare it thus. Quench the Lime-stone in Water, then let it stand to settle, and pour off the Water by Inclination. If ye please, ye may pour fresh Water upon the slaked stone. These Waters are stock'd with the volatil and drying Salts of the Lime, and consequently are of use to defeat the acid Ferments of Ulcers.

'Tis well known Lime-water is one of the best External Remedies against Ulcers, Tettars, Gangrenes, &c. whether applied by it self, or mix'd with *Sublimatum* under the Title of *Aqua Phagedenica*.

If we mean to administer it inwardly, it must be mix'd with some Vulnerary, Pectoral, or Sudorific Ptilan, according as the Indications direct. But the best way of using it, is to mix it with Milk. It hinders the Coagulation of the Milk, and fits the Balsamic Parts for sweetening the Mass of Blood: Sometimes 'tis good against Phthysics and spittings of Blood; but its distinguishing Talent is that against the pissing of Blood. In Claps it never does harm, but almost as little good. We give it Morning and Evening.

Sometimes we make Nephritical Tinctures against the Gravel and Ulcers of the Kidneys.

Schroder sprinkles Lime with Spirit of Wine, and then draws off a Spirit from it, which he recommends for the Gravel.

I must not forget the Indian Balsam call'd *Copai*. They say 'tis a wonderful Remedy for Claps and recent Wounds; and some will tell you, it cures Wounds in 24 hours.

The Powder of Sympathy shall conclude this Chapter. 'Tis only Vitriol calcin'd in the Sun. Experience can only justify the Allegations of its Patron. Reason will go thus far; that if it be applied in Substance, or dissolv'd in any Liquor, it must needs be very useful. But as for the steeping of a bloody Clout in the Water, or strewing the Powder upon it, whether such Stratagems as these will cure the Patient at a distance? I'm sure Reason

son knows nothing of the matter; and I believe all reasonable Men will find it hard to work themselves into the belief of such Fancies.

A List of Vulnerary Remedies.

PLantan, Knotgrass, Ho-setail, Burnet, middle Comfrey, Sanicle, great Comfrey, ground Ivy, Scabious, Speedwell, Elecampane, St. John's Wort, Ladies Mantle, lesser Centory, Juniper, Savin, Crabs Eyes, Cora', Turpentin, Balsam of Peru, Lime-water; in Ptilans and Decoctions.

Broth of Crabs.

Balsam of Copaiba, 10 5 or 6 Grains in a convenient Vehicle.

The Sympathetic Powder.

Chymical Preparations.

Water for Gun-shots.

Queretanus his Clap Water.

Poterius his Antihelctic.

Bezoar Mineral,

Diaphoretic Antimony.

Balsam of Sulphur, from 6 to 12 drops in some Vehicle.

Magistery of Sulphur, from 6 to 16 Grains.

Sugar of Lead, from one to four Grains.

Rectified Spirit of Men's Blood, from 8 to 30 Grains

Spirit of Lime, from half a dram to a dram in a glass of Liquor.

The Forms of Receipts.

The Spirit of Lime drawn with Spirit of Wine, is an excellent Vulnerary, both for Internal and External Uses. If we mean to give it for the Stone, 'twill be best to burn the Spirit of Wine upon it; and then the remaining Spirit of Lime must be given in a smaller Dose.

But considering the Spirit of Wine is too weak a *Menstruum* for unlocking the Principles of Lime, 'twill therefore be proper to sharpen it with a few drops of the Spirit of Salt, which is declar'd by many Experiments to be the true Dissolver of this Mineral.

Quercetanus's Clap Water.

Take the Powder of Mint, Dittany and roots of Florentin Orris, of each an Ounce; Seed of the Chast-tree, Rue and Lettuce, of each six drams; Venice Turpentin, four Ounces; White-wine, twenty Ounces; put all into an Alembic, and distill in a Balneum Vaporis. Dose two spoonfuls in the Morning after Purgation. 'Tis excellent in Claps and Ulcers of the Kidney's, and other parts. It may also be us'd by way of Injection.

A Vulnerary Tincture.

Take equal parts of the Vitriol of Steel and Sugar of Lead; put 'em into a Phial to be cover'd with another a top; having first pour'd in Spirit of Wine till it rise a fingers breadth above the Ingredients. Let all circulate in a gentle heat for the space of eight days. Then pour off the Tincture, to be exhibited to half a dram in some proper Liquor against the Phthisic and Internal Ulcers.

A Vulnerary Soap.

The forming of a Scar.

Take an Ounce of the Oyl of Turpentin, two Drams of the fix'd Salt of Tartar. Let 'em stand in Digestion; adding at last a dram of the Volatil Salt of Amber, and a dram of the Diaphoretic Mineral. Make a Mass. to be given to a dram every Morning against Internal Ulcers.

C H A P. X.

Of Cicatrifying Med'cines.

WHen the Flesh grows up again in Wounds, Nature provides a covering for it, by joyn- ing the divided Skin, by vertue of the Juice circu- lating in the Fibres, that sticks to the sides of the Breach. But she is oftentimes interrupted in that design by an acid Moisture, which breaks thro the Texture of the Scar, and ought to be particularly taken care of.

Incarnating Med'cines will not serve our turn in Sarcotics this case, because they are many of 'em viscous and Cica- and apt to joyn in with the Juice in the Skin; and trifers accordingly we find the use of 'em retards the form- differ- ing of the Scar.

Indeed if the Flesh be not made up, Cicatrifiers are not yet proper, because they absorb the Parti- cles of the Blood which would serve to enlarge the fleshy Fibres.

The Remedies which help to form and perfect the Scar, are burnt Brass, Cerufs, Balsam of Sul- phur, Aloes, Pomgranat Shells and Flowers; burnt Lead, Litharge, Calaminar Stone, Coral, Bole Armeniac, Ashes of Paper, Tobacco, and several others. In the mean time we must call to mind, burnt Brass, burnt Antimony, Quick-lime, burnt Allum, Colcothar, and such like, are Corrosives; and must be well wash'd and incorporated with some Ointment, before they be employ'd on a Cicatrifying Design.

Sometimes indeed it so falls out; the use of Corrosives or Cautics facilitats the forming of the Scar more than any thing else; whether by a more power-

powerful opposition to the acids, or by removing the spongy Flesh that retards the work.

A List of Cicatrifying Remedies.

Ashes of Paper, Ashes of Tobacco, Bole Armeniac, burnt Lead, burnt Brass, Litharge, Ceruss, Blood-stone, Calaminar-stone, Pomgranat shells and Flowers, Myrrh and Coral, Unguentum Album Rasis, Pompholix, &c. by themselves, or in Ointments.

Madam Fouquet's black Ointment.

Take of Oyl Olive, 7 pound; of Lint, 2 pound; Ceruss in Powder, a pound; Litharge of Gold, half a pound; Myrrh pulveris'd, a pound; Ashes in powder, two Ounces and a half; make a Plaster according to Art.

C H A P. XI.

Of Blistering Medicines.

Blistering Remedies are those, which applied to the Skin, break thro its Texture, and raise up Blisters full of Water.

Commonly they are very sharp, and their Particles in a rapid Motion; by vertue whereof they separat the Cuticle from the Skin, and tear the Lymphatic Vessels.

It may be asked, Why these Blisters have only Water, and no Blood? I answer, these Remedies being near allied to Caustics, raise a slight Crust which blocks up the Blood; tho at the same time the Serum being thinner, forces its passage thro the

Crust;

Crust; but not being able to penetrat the Cuticle, lifts it up in Blisters.

Under the Head of sharp Med'cines, I have Their Use. shown the difference of Caustics and Blisters; and therefore shall spare the Repetition here.

These Remedies are made use of in Dropsies, Cachexies, and some Palsies, where a redundancy of Moisture gives rise to the Disease; because they serve to remove, or at least weaken the cause. For the same Reason they are proper against Oedematous Tumors. We are wont also to apply 'em to the Head for Head-aches, Lethargies, Apoplexies, Malignant Fevers, &c. Their sharp Salts do effectually defeat or evacuat the acid Salts or Serum that oftentimes gives rise to inveterat Head-aches. And in the case of Lethargies or Apoplexies, they stir up and retrieve the sense of the Nerves, and withal rescue them from the foreign moisture that oppresses 'em.

Blistering Med'cines are likewise serviceable in the Gout and Malignant Fevers. In the former, they eclipse the Pain, mortifie the acid Salts, and evacuat the stinging Serum. In the latter case they conquer the foreign Ferments by means of their volaril Parts, and at the same time prepare the Pores of the Skin for straining them off from the Blood. Just as we see Ulcers and Gangreens oftentimes cure malignant Fevers, by rendring the Flesh capable to separat the malignant Ferments from the Skin.

There are several sorts of Blistering Med'cines. Their dis-Fire applied to the Skin, will heave it up in watry ference.

Blisters. Black Soap with common Salt, all the Sparges, Mustard, the sharp Crow-foot, and Cantharides mix'd with Yest, or with the pulp of Figs; all these will have the same Effect. To which we may joyn Euphorbium, Pellitory, Nellebor, and Pepper-wort. But after all, the Plaster of Cantharides, or any other Preparations from the *Spanish* Flies, are much the best. They contain a sharp Salt that galls the Membrans, and power-fully

fully ferments the Serofities of the Blood. Only we must take care, their ferment falling in with the Urine does not inflame the Bladder, or injure its Membrans; for the Salt contain'd in those Flies, ferments much more readily with the Serum of the Blood, than any other humor; and therefore since the Urine is just the very Serum they are apt to ferment, 'tis to be fear'd they may occasion disorders in the Urinary Passages, even when outwardly applied. To prevent this Inconvenience, the seed of Bishop's-weed is added to them; which, as *Riverius* says, guards off the Cantharides from injuring the Bladder. To my Fancy, 'twere better to add a few drops of the Oyl of Anis. But in effect, I think the disorders they may occasion in the Bladder, are not to be much fear'd, since the removal of the Plaister will quickly put an end to 'em, when they happen.

A List of Blistering Medicines.

Black Soap, Salt, Mustard, the sharp Crow-foot, the Spurges, Euphorbium, Pepper-wort, Cantharides, Plaister of Cantharides.

Forms of Receipts.

A Blistering Emplaster.

Take Yest, mix it with the Powder of Cantharides, and so apply as occasion serves.

The Plaister of Cantharides corrected.

Take two Ounces of Gum Elemi, and one Ounce of Turpentin, melt 'em gently together, adding half an Ounce of Cantharides, and half an Ounce of Bishops-weed, both being well pulveris'd and mix'd.

C H A P. XII.

*Of the Remedies that are good
against Burnings.*

HAVING dispatch'd the Remedies for simple Wounds and Ulcers, I reckon 'twill not be improper to touch upon those which heal the Blisters that Fire raises upon the Skin.

Of such Med'cines there are two sorts; one Oyl, intangling and gross; the other volatil and spirituous. Two sorts
of 'em.

Immediately after burning, we must endeavor to inveigle and imprison the fiery Particles. Upon this design we imploy Oyls, Meals, Fat, Onyons, Starch; and in short, whatever abounds in a coarse Sulphur.

If the burning be of any standing, the Remedies now mention'd are not subtil enough to pursue the Fire to the Places where it is then lodg'd. For which Reason, in such Cases, we use to joyn 'em with Spirit of Wine, or some volatil sulphureous thing, and apply them hot; in order to open the Pores, make room for some of the fiery Particles to come out, and involve the rest.

Wine is a proper Remedy for Burnings caus'd by boiling Oyl, because its volatil Sulphur disengages the Particles of Fire, and sends 'em forth; but does not put 'em in motion, as Spirit of Wine would do.

Some Remedies us'd for burnings are capable to receive the fire into their Pores. Such are Lime-water, especially if it be mix'd with some Oyl; or the Ashes of Vine-twiggs mix'd with Oyl of Roses.

After

After the burning is accounted for, a Physician's next care is to mitigat the Symptoms. To keep down the bubbles and risings of the Skin, we apply the Meal of Barly beaten up with the Yelk of an Egg, and a little Salt; or else white and black Olives beaten. To prevent a deformity or Scar, we apply the Roots of Sowbread beaten with Houfleeck. But of all the Symptoms, Pain is the most urging: To appease it, we apply Anodyns, Oyls, Cream of Milk, Oyl of Eggs, Incense, Mallow Leaves, melted Lard mix'd with Rose-water, the Mucilage of Quinces, &c.

A List of Remedies for Burnings.

THE four Meals, all sorts of Fat, Starch, the middle Bark of Elder, common Onions, Lilly Roots, Lime-water; in Ointments, Cataplasms and Liniments.

Oyl of Walnuts, Oyl of sweet Almonds, Oyl of Lillies, Hogs Grease, Spirit of Wine, Horse-dung, Wine, the Ointment Populeum, Houfleeck, Sowbread Roots, Plantain, Beets; Ashes of Vine-twigs with Oyl of Roses. Meal of Wheat, Barly, &c. Anodyns.

The Forms of Receipts.

An Ointment.

Take new Wax, half an Ounce; melt it; add three Ounces of Oyl Olive, and half an Ounce of Elder Barks, make an Ointment.

A Liniment.

Take an Ounce of Lime-water, and two Ounces of the Oyl of Linseed; shake 'em till they make a sort of Nutritum. Add a Dram of Sugar of Lead, make a Liniment.

H. H.

Hernius his Ointment.

Take round Naveus beaten, Oyl Olive, Salt Butter, and yellow Wax, of each equal parts; make an Ointment. 'Tis of excellent use against all Burnings, especially those of Gun-powder; and besides has this peculiar quality, that it leaves no Scar.

C H A P. XIII.

Of Remedies us'd against a Caries of the bones, or imploy'd to breed a Callus.

Sometimes it so falls out, that the healing of Ulcers is retarded by a Corruption in the Bone, which feeds the Ulcer with keen Particles. In such Cases we are oblig'd to *Exfoliat* and take off the Corrupt part of the Bone where the acids nestle.

The Corruption of Bones is frequently occasion'd by Internal Diseases, such as the King's Evil, Scurvy, or Pox. However, upon this occasion, we shall consider it by it self, as independent of any other Disease; for every body knows, that when it proceeds from Internal Causes, they must be remov'd. In the Pox, Antivenereal Med'cines, and sometimes fluxing are needful. In the Scurvy, Antiscorbutics are requir'd. In the Kings Evil, the Specifics against that Disease must still be joyn'd with the Remedies imploy'd against the Caries: Of these elsewhere. To return to the Corruption of the Bone, consider'd by it self.

The Remedies us'd upon this account, are much of a piece with Causticks. They operat in the same manner; that is, their cutting pointed parts wedge themselves into the Fibres of the Bone, and treat 'em in the same manner as Caustics do those of the Flesh; so that those Fibres of the Bone are
by

by this means render'd incapable to partake of the nutritious Juice; and consequently must needs part from the rest.

Their difference.

Of these Remedies there are two sorts; one extremely acid, as the Spirit of Salt, Spirit of Honey, the Caustic Oyl of Antimony, Oyl of Vitriol, and the acid Oyl of Camphyr. The other sort are strong Alcalies; such are Euphorbium, the Alkaline Oyl of Camphyr, Oyl of Paper, Capital Lees, and actual Cauteries; this sort is preferable to the former, because they suck up the acid humors, and dislodge 'em of their Nest; and likewise blunt the pointed acids lodg'd in the Fibres of the Ulcer.

The Generation of the *Callus* is Nature's business. There are no Remedies, whether Internal or External, that can contribute any thing to forward it. When a bone is broken, we can only lay the two ends by one another, and hold 'em fast in that posture with Splinters, Bandages, Swathes, &c. leaving Nature to furnish the Juice that cements 'em. If the Person be of a dry Constitution, we may give him Veal Broth. Some will tell you, the Juice of Primroses, *Osteocolla*, Comfrey, &c. taken inwardly, will promote the *Callus*; but both Reason and Experience disprove the Allegation. I believe Acacia, Hypocistis, Bole Armeniac, seal'd Earth, Pomgranat Flowers, Cypress-Nuts, Gum Tragacanth, &c. applied Externally, may keep in and prevent the dissipation of some parts of the nutritious Juice of the Bone, by vertue of their astringent compacting Quality. But the Great Remedy is Ease and Repose. I am not unacquainted with the wonderful Stories of *Osteocolla*, *Hildanus*, and several other Authors are Vouchers. But after all, I cannot see the conclusiveness of 'em. If that Stone have any effect, it must only be the imbibing and defeating of the acids, which might disturb the peaceable Re-union of the broken parts, by putting the Lymph into a Fermentation.

A List

A List of Remedies for the Corruption of Bones.

Birthwort, long and round, Aloes, Myrrh, Euphorbium, Camphyr, an actual Caustery, the Caustic Stone.

Chymical Preparations.

The Spirit of Salt, Oyl of Vitriol, Oyl of Camphyr, Caustic Oyl of Antimony, Oyl of Paper, Tincture of Aloes.

The Forms of Receipts.

A Water.

Take two quarts of Brandy, infuse in it Birthwort, round and long, of each half an ounce; let it stand all Night upon hot Ashes; add a Dram of Euphorbium in Powder, two Drams of the Tincture of Aloes; then let 'em stand six hours longer, and strain out the Liquor for Use.

The Caustic Stone.

Take the Ashes of Egg-shells, Vine-twigs, Bean-barks; make a Lye as strong as ye can; let it gently evaporat to the consistence of an Extract. Then form it into small Troches, to be reserv'd for use in a Vessel close stop'd.

CHAP. XIV.

Of Remedies for Gangreens.

A Gangreen is occasion'd by the Coagulation of The Cause Blood in the Vessels, upon which it corrupts ses of a and infects the Flesh. Since the part is not duly Gangreen, nourish'd, and that the humors repairing thither fetulent and corrupt, it must needs follow that the part will be mortified, and give a stinking smell.

S f

Hence

Volatil
Remedies.

Hence we may conclude we ought to scarify the part, and then apply volatil Med'cines, in order to retrieve the motion of the humors, and conquer the acids that caus'd the Coagulation; and to irritat and stir up the part; so that the Blood and Spirits may be solicited to repair into it. Thus we apply Spirit of Wine, the Tincture of Myrrh and Aloes, the Water for *Gun-shots*, Lime-water, *Aqua Phagedenica*, Oyl of Mercury, the volatil Spirit of Sal Armoniac and Urine, the Oyl of Camphyr, &c. All these Med'cines of Alkaline parts, some fix'd, some volatil, dissipate the acid that occasion'd the disorder, and relieve the primitive Vigor of the part.

Acids.

'Tis not easie to conceive the usefulness of acids in this Disease; such are Allum Water, Vinegar, Sea-salt, Verdigris, the Ointment *Aegyptiacum*, the Caustic Oyl of Antimony, &c. They are of the same nature with the morbid cause, and one would think should rather augment than lessen the Disorder; and yet Experience recommends 'em as very proper. Now in order to unfold this Mystery, we must call to mind that the cutting pointed acids may break thro' the corrupt Flesh, and part it from the quick. The sound or quick Flesh they do not injure, 1. Because their Particles are softened and blunted by their struggle with the mortified part. 2. The quick Flesh being water'd with Balsamic and Oily Blood, is able of it self to guard off the sharp stinging salts. Upon this supposition we may admit that acids are useful against Gangreens. In the first place, they separate the mortified and quick parts: Secondly, they provoke and irritat the quick; and by so doing solicit the Blood and Spirits to repair plentifully thither, and prevent further Mortification. In the last place, they make a Crust which takes off the spongy Flesh that the congealing acids are wont to nestle in.

In the mean time 'twill be proper to exhibit Internal Remedies, especially if we suspect the

Gan-

Gangreen proceeds from an Internal Cause. The proper Internal Remedies are those which make the Blood subtil, put it into motion, and forward its Passage to the outer Parts. Such are Venice Treacle, Diacordium, Spirit of Wine Camphoris'd, volatil Salts, and all Sudorifics or Cordials that imbibe acids. If the case be so put, that neither Internal nor External Remedies can put a stop to the Gangreen, then we must come to Amputation,

A List of Remedies against Gangreens.

For Internal Use.

Sudorifics, Cordials, Gentian, Birthwort, long and round, Water Germander; in Potions, Tinctures, or Decoctions.

For External Use.

Aloes, Myrrh, Lime-water, Sea Salt dissolv'd, Vinegar, Verdigris, Wine, Urine, Allum dissolv'd, The Ointments Egyptiacum and Apostolorum. The Decoction of Arsmart in Wine with Brandy. The Lye of the Ashes of Scabious, Water Germander, Wormwood, &c.

Chymical Preparations.

Sal Armoniac boyl'd in Urine, Oyl of Antimony, Spirit of Honey, Spirit of Wine, Spirit of Wine Camphoris'd, the Queen of Hungary's Water, the Tincture of Aoes, the Tincture of Myrrh, Elixir Proprietatis, Corrosive Sublimatum, Oyl of Mercury, Oyl of Camphyr, Oyl of Guaiacum, Spirit of Guaiacum, the volatil Spirit of Sal Armoniac, the Water for Gun-shots, Aqua Phagedenica, Oyl of Turpentin, Sal Armoniac, the Decoction of the Drofs of Antimony in Vinegar.

The Forms of Receipts.

A Water for a Gangreen.

Take the canstic Troches made of the Lye of Vine-
twigs or Egg-shells, dissolve 'em in Brandy. Mix
S i 2 the

Remedies proper against Ringworms.

the Solution with the like quantity of the Spirit of Wine Camphoris'd.

Aqua Phagedenica.

Some prepare this Water by dissolving Corrosive Sublimatum in Lime-water. But the better way is to take two Drums of sweet Mercury, and dissolve it in Lime-water and Spirit of Wine, of each an ounce.

C H A P. XV.

Of Remedies proper against Ringworms.

Two sorts
of Ring-
worms.

THERE are two sorts of Ringworms; one quick, the other mealy; the first dives a little into the thickness of the Skin, and proceeds from the Obstructions of the Capillary Vessels occasion'd by humors congeal'd by acids. This Blood which stagnats by reason of the Obstruction, ferments; and by vertue of the Exaltation of its Principles, produces a redness and Pain.

Med'cines
improper.

In remedying this Disorder, we must avoid Repercussives, partly because they stop the Pores of the Skin, and partly because they fix and congeal the humors, and so inflame the Malady.

We are likewise to stand off from strong Disscussives, such as the Spirit of Wine, volatil Salts, the Queen of Hungary's Water, &c. by reason that they heighten the motion and fermentation of the humors lodg'd in the Glandules.

Proper
Remedies
for the first
sort.

The fix'd Alkalies are proper on this occasion. They imbibe and blunt the acids without raising any violent motion or fermentation. Some exalted Sulphurs are likewise not improper, providing their Salts are fix'd, and not volatil; or at least, if volatil, they ought to be fix'd by acids, and

and envelop'd by oily parts. Thus we use to apply to a stubborn Ringworm, the distill'd Oyls of Boxwood and Guaiacum; the black or the clear Oyl of Amber, rectified Oyl of Hartshorn, &c. but by reason of their inflaming quality, they ought to be wrap'd up in a double quantity of Pomatum, Lard, fresh Butter, &c. For the same Reasons we find the following Ingredients likewise approv'd; viz. The Sugar and Magistery of Lead, the Salt of Tartar, the Oyl of Tartar *per deliquium*; Oyl of Cedar, the white and red precipitat, *Aqua Phagedenica*, the yellow Precipitat; *Sublimatum Corrosum* corrected and qualified; *Arcanum Corallinum*, Tincture of Antimony, Oyl of Paper, Oyl of Myrrh, and stale Bacon about twenty or thirty years old.

So much for External Remedies. Internally we give Purgatives usher'd in by Mercurial Preparations, fix'd Alkalies, &c. I shall only observe by the way, that when the Fermentation is very high, we sometimes use to check it with acids, such as the Philosophical Spirit of Vitriol: If the Pores of the Skin are shut, we endeavour to open 'em with volatil acids, such as the Spirit of Tobacco.

The mealy Ringworm proceeds from acids lodg'd in the *Corpus Reticulare*, which break thro the Texture of the Cuticle, and make it fall off like Meal or Dandriff. In this case all Alkalies, whether fix'd or volatil, are proper. But the former claim a Preference, because the Malady being superficial, does not stand in need of penetrating Med'cines. To these fix'd Alkalies we always joyn Oyls. Thus we make use of the red Precipitat, or sweet Mercury, mix'd with the Ointment of Roses, Sugar of Lead mix'd with the same Ointment; *Unguentum nutritum*, *Unguentum album Rhafis*, prepar'd Tutty, and many other Preparations; such as Veal or Capon Fat melted, and cool'd again in Snow-water; and then wash'd with Spirit of Wine, &c.

A List of Remedies, against the Ringworm.

Oyl of Cedar, Bacon, Tutty, Cernfs, Burnt Lead, Oyl of Sweet Almonds, Oyl of Roses, Sulphur, Chimney soot, Borace, Staves Acre, Verdigris; applied Externally.

Chymical Preparations.

Sugar of Lead, Oyl of Earth per Deliquium, Rose Water, the Tincture of Antimony, Oyl of Paper, Oyl of Myrrh, the White and Red Precipitat, the Rose colour'd Precipitat, Sublimatum Dulcified, Salt Petre.

The Forms of Receipts.

An Ointment for the quick Ringworm. Take Staves Acre, half a Dram; Crude Mercury, three Drams; Euphorbium, black and white Hellebor, Verdigris, of each half an Ounce; Pellitory of Spain, Vitriol, Salt, Sulphur, of each two Drams; Turpentine two Ounces; Grease, half a pound. Make an Ointment according to Art.

C H A P. XVI.

Of Remedies for the Scab.

The Cause. **T**He Scab and Itch arise from sharp or Acid Salts sticking upon the Skin, and congealing the Blood and Humors as they pass. The Pushes rais'd up by this means are big or small, painful or easy, in proportion to the Comparative Acrimony of the Salts, and the various qualities of the Humour that stands congeal'd. For

For a Cure of the Scab, we give inwardly Pur- Internal
gatives to tame the Acids, such as Aloes, Colo- Reme-
quintida, the Confection Hamech, *Hiera Picra*, dies,
the White Precipitat, the Rose colour'd Precipitat,
Sweet Mercury and all its Preparations for Internal
uses. They Precipitate and defeat the Acid Salts.

We likewise exhibit such Remedies as soften and
imbarrafs the Acids. Such are the Flowers of Sul-
phur, Lozenges of Sulphur, the Pouder of Vipers,
Volatil Salts, and all Diaphoretics.

Alkali's are used Externally. Elecampane and Pati- External
ence being stock'd with Alkali's are made use of on Remedies
this Occasion; and if the Scab be not deep rooted,
upon Internal Causes, do often compass the Cure.
For the same Reason Authors Recommend Black-
smiths Water and Urine. But of all the Remedies
imploy'd Externally, Tobacco, Brimstone and Mer-
cury, are much the best:

Tobacco is a Plant universally known. 'Tis Tobacco.
charg'd with sharp Volatil Salts, inviegled in Oyl
with some Acids. Its Infusion in White Wine,
rubb'd upon the Scabs, will dry 'em up, and heal
them. Its Spirit and Oyl claim the same Vertue.
But we must take care not to rub hard, else, if the
Skin be broke, they may cause Vomiting.

Brimstone is a *Bitumen* laden with Acid and Oy- Brimstone
ly Parts. 'Tis by Vertue of its Oyl that it cures
the Scab, that is, imbarrafses the Acids that gave it
a Being. If we make it into a Cinnabar with
Mercury, 'twill operate more effectually. Its Na-
ture, Preparations and Vertues are accounted for
elsewhere.

Quicksilver is a Mineral admirably well qualified Mercury,
to swallow up Acids. We use to Kill it with Brim-
stone, Turpentine or Spittle, and mix it with
Ointments for the Scab. Sometimes we make use
of Mercury fix'd with a few Acids, as Sweet Mer-
cury, and White Precipitat. Commonly we allow
a Dram of White Precipitat to an Ounce of Oint-
ment. Tho it be already tinctur'd with Acids, yet
it fails not to imbibe those it meets with in the

Pores. To the above-mention'd Ingredients, we may add Sugar of Lead, Salt of Tartar and other Alkali's.

The List.

For External Use.

*P*atience Roots, *Elecampane* Roots, *Blacksmiths* Water, *Urine*, *Tobacco*, *Brimstone*, *Mercury*; In Ointments or Pomatum.

For Internal Uses.

Senna, *Confectio Hamech*, *Hiera Picra*, *Fumitory*; in Purgative Potions.

Aloes, *Coloquintida*; in Pills.

Guaiacum, *Chima*, *Sassafras*; in Ptisanes.

Vipers in owder.

Chymical Preparations.

The Spirit of Tobacco, *the White Precipitat*, *the Flowers of Brimstone*, *Sugar of Lead*, &c.

Forms of Receipts.

A Sweet Smelling Pomatum for the Scab.

Take of the Ointment of Roses, one Ounce, *White Precipitat* a Dram. *Mix*.

C H A P. XVII.

Of the Scurff on the Head.

The Cause.

THis Malady is occasion'd by a Tartareous Matter Congeal'd by Acids in the skin of the Head. So that its Proper Remedies are the strongest Alkali's, such as Urine, and Oyl of Tartar. Sometimes

times these Remedies are of no use because they cannot penetrate. In this case we must warm the Urine, or apply Cantharides with Yest, or the Spirit of Urine; and Plaisters of Gum Ammoniac, Galbanum, Sagapenum, Oppopanax, and such other Gums as are fraughted with penetrating and deterfive Salts.

We likewise add Mercury to the Plaisters. Some put in Burgundy Pitch and Black Pitch: but its only vertue lies in sticking close and so bringing off some Matter; and therefore avails us but little.

Inwardly we imploy the same Remedies as we recommended for the Scab: Sometimes a Strict and Regular Regimen will conquer the Acids, and cure the Ulcers they occasion

The Lift.

For Internal Use.

Purgatives, Sudorifics.

For External Use.

Cresses, Coleworts, Sharp-pointed Dock, Tapsus Barbatus; in Decoctions.

Cantharides in Plaisters, Juniper in Ointments, Urine, the Lye of Oak Ashes, Arsenic in Decoctions. Gum Ammoniac, Galbanum, Bdellium, &c. Ship-Pitch, Rosin, Verdigris, Crude Mercury (cautiously us'd) Brimstone, Burgundy Pitch, Vitriol, Camphyr, in Ointments.

Chymical Preparations.

Balsam of Sulphur, Spirit of Urine, Oyl of Gum Ammoniac, Oyl and Salt of Tartar, White and Red Precipitats.

Corrosive Sublimatum, Oyl of Ratsbane, Oyl of Tobacco; in small quantities, well mix'd with Ointments.

The

The Forms of Receipts.

An Ointment.

The following Ointment was communicated to me by Dr. Rongear, in the following Letter:

I have a mind, *says he*, to impart to you an Ointment of my own invention, which cures the most inveterate Scurff in Eight days time, without pain.

I take the Seed of Juniper, and bruise it in a Mortar; then I boyl it with unsalted Butter or Fat, in a New Pot close-stopp'd, to keep in the Fugitive Salts.

I've frequently experimented its Vertues. Before using it, the Body ought to be purg'd with Diagrydium, Salt of Tartar, and Sweet Mercury, incorporated in Conserve of Roses. When the Ointment is applied, let the Head be well cleans'd. I use to wash the Head and Ulcers with Urine, or the Decoction of Cresses, or Juniper berries; and then wipe it gently without rubbing, and immediately apply the Ointment Melted and Hot, with a small Rag, and cover up the head with a Cap of a Hog's Bladder.

Another Ointment

Take of Gum Ammoniac, two Ounces; Vinegar an Ounce and a half; New Wax an Ounce; Oyl Olive seven Ounces; Verdigris and Common Salt, of each a Dram and an half; melt the Gum in the Vinegar, and the Wax in the hot Oyl; then incorporate the Ponder of the Salt and Verdigris, stirring it well till it acquire the Consistence of an Ointment.

C H A P. XVIII.

Of the Kings Evil.

Sometimes Acids Congeal the Lymph in the Glands of the Body, and so occasion those Tumors which we call the Kings Evil. Commonly these Acids are Gross, and stop the Circulation of the Lymph, and Spirituous Medicines applyed do sometimes dispel 'em. The Cause.

If the tumours are not Ulcerated we must purge strongly and melt down the Humours in Proportion to the Purgative force. Mercury is very successive whether in Purging Pills, or by it self before Purgation. We are wont to give Pills with Crude Mercury or else with the Panacea; and then back 'em with Ptisanes charg'd with Alkali's, first fix'd and afterwards Volatil. The Volatil Alkali's are improper at first, because they carry off the Subtile part of the Humors. Upon which account we choose to Season the Ptisanes at first with Salt of Tartar, the Vegetable Salt, &c. and afterwards come to the Volatil Spirits and Salts, such of 'em as do not much disturb the Blood; otherwise they might create Ulcers where there were none before. Of this sort are Scurvygrass and Cresses, their Spirit: which are able to penetrat to the seat of the Distemper, without raising Tumults among the Humours. Internal Remedies.

Of all Sudorifics those which put the Blood into violent motion are most improper. For this disease proceeding from the Coagulation of the Lymph, is only to be remov'd by such Remedies as make the Humours Liquid and Thin, without any great Fermentation. Now those which occasion an Impetuous Agitation of the Blood are so far from doing good, that they're apt to occasion Inflammations and,

and several other bad Symptoms. For the congeal'd humors, being by their means Rarified on a sudden, are apt to tear and fly up upon the Solid and Membranous parts: And perhaps 'tis upon this account we see Guaiacum is not so much approv'd in these Cases, as China, which we give in Substance to two or three Drams, and in Ptsanes to two Ounces for every Quart of Liquor.

External Remedies.

Externally we apply Mercurial Plaisters; Mercury being the strongest Discussive yet known. We use likewise to Foment the Tumours with Spirit of Urine, and then apply the Soap Plaister, by Reason of the Alkalin and Penetrating Salts these two Remedies enjoy.

Sometimes we throw a Living Toad into Boiling Oyl, and anoint the tumours with it. The Toad expiring in the Oyl imparts to it a good Measure of Spirits and Volatil Salts; and the Oyl being Tenacious Imprisons these Subtile parts, and so procures 'em Leisure to insinuate themselves into the Pores of the swelling. The Plaisters of Gums are also sometimes us'd. Caustics are not to be ventur'd upon till the last Extremity. 'Tis true they drink up a great part of the Acids they meet with: But they do not penetrat far. Besides, they are apt to cause Inflammations and an unseemly scar.

Internal Vulneraries.

If the Swellings break we exhibit Pilewort and Daisies by way of Ptsanes. These two Ingredients being richly stock'd with Lixivious Salts and Oyl, are capable to swallow up the Acids and keep 'em under. Mercury is likewise us'd on this occasion together with Purgatives. For External use we prepare Lotions of Pilewort, Salt of Tartar, &c. Sometimes we apply the Red Precipitat and Sublimatum in order to imbibe the Acids; Sometimes Caustics, sometimes Suppurating Medicines, and Mercurial Ointments. If the Cure advance but slowly, and if the skin be thin and fitted to an easy Transpiration, then we have recourse to Sudorifics such as Guajacum, Sassaferilla, and Sassa-

safrafs; because they check the Acids, and expel most of 'em.

If the Sweating do not succeed easily, 'tis to be fear'd Sudorifics may extract only the subtile part of the Humours: And therefore in such cases we must insist upon Mercurial Preparations.

The List of Remedies for the King's Evil.

For Internal Use.

Sudorifics, Daisies, Figwort, Marygold, Scurvy-grass, Cresses; in Pilsanes.

China in Powder, to three Drams; Sweet Mercury, Purgatives.

For External Use.

The Juice of Tobacco, the Juice of Hemlock, Mercury, Urine, Gum Ammoniac, Galbanum, Opopanax, Sagapenum, &c. Oyl of Toads, Camphyr, the Plaister of Hemlock, Cantheries.

Chymical Preparations.

Spirit of Urine, Oyl of Tartar, White Precipitat, Corrosive Sublimatum, Oyl of Gum Ammoniac, Oyl of Wax, Sudorifics.

A Plaister.

Take of the Plaister of Ceras, one Ounce; Oyl of Toads, two Drams; Sweet Mercury, and Camphyr pulveris'd, of each a Dram: Mix and apply.

C H A P. XIX.

*Of Remedies for Tumors in the Legs
call'd Lupi.*

The Cause. **T**Hese Tumors are occasion'd by Acid Humors congeal'd and shut up in particular Bladders.

While they're young and small, we may apply Discussives, such as Mercurial Plaisters, a Plate of Lead rubb'd over with Quick-silver, the Plaister of Mucilages mix'd with Mercury, the Decoction of Dwarf Elder, Cataplasms of Smallage Leaves and Urine, &c. This sort of Remedies penetrates into the Pores, and splits and disperses the condensed Humors. Sometimes the bare rubbing of these Tumors will put the Humors in motion, and so disperse 'em.

If the bladder be thick, we must choose more strong and sharp Discussives, such as Plaisters of Gum Ammoniac, Galbanum, &c. To which we may add Antimony in Pouder, which by Vertue of its Metallic Parts, will be serviceable in dividing the Gross Humors. This sort of Plaisters will raise Little Pusshes upon the Swelling, and so draw forth the Water.

We may likewise use Cataplasms of Soubread Roots, Wild Cucumbers, Juice of Hemlock, &c.

If the Bladder be extream hard, it must be open'd with Caustics, and then treated as an Ulcer.

In the mean time, we must take care the Caustic be not applied near to Tendons, or Large Vessels, or the Sutures of the Skull.

'Tis likewise to be remark'd, that such Tumors as are black, and contain Corrosive Humors, must of necessity be open'd, because they do not easily
come

come to a head ; and indeed 'tis a hard matter to heal 'em ; inasmuch that after they're open'd they become Cancræous Ulcers, much more troublesome than the former Tumors.

The List.

A Plate of Lead applied, Mercury, Macilages in Plaisters, Galbanum, Sagapenum, Oxicroceum Plaister, Diabotanum, Diachylon Magnum, Antimony in Poudre, Verdigris, Urine, Smallage Leaves, Dwarf-Elder Leaves, Cypress Leaves, Sonbread Roots, Wild Cucumber Roots, Vinegar, Cantheries, Plaister of Marcassite.

C H A P. XX.

Of Remedies for making the Hair grow, or fall off.

THE Hair is nourish'd by Liquors as well as any other part of the Body.

If we mean to make 'em grow, we must consider, whether the Pores are too strait to receive the Juice from the Blood, or too Large and apt to let the Liquor slip out. In the former Case we endeavor to dilate ; in the latter, to contract the Pores, and prevent the untimely Efflux of the Nutritious Juice.

To enlarge the Pores of the Hair, there's nothing more approv'd than Brandy, and burnt Bees ; By Vertue of their Active Particles, they put the Liquors in motion, and likewise check prevailing Acids.

To contract the Pores, and hem in the fugitive Liquors, we imploy Acids softned and qualify'd by
Clammy

Clammy Particles : Such are the Water of Honey, or Vipers Fat or Bears Fat.

Note.

In the mean time 'tis to be observed, these Remedies are to no purpose when an Internal Cause withstands 'em. For instance, If a man be pox'd, 'tis impossible to make his Hair grow without curing that disease.

Depilatoria.

As for the Med'cines call'd *Depilatoria*, their business is to turn off the Nutritious Juice from the hair, either by enlarging or contracting the Pores, or by over-rarifying and Congealing the Humors.

Those which rarify the Humors, enlarge the Pores, and likewise rip up their Texture ; are extream sharp Alkalies, namely Lime, Ratsbane, Orpiment, &c. Their Caustic parts are very Rank and Keen ; and 'twill be a hard matter to Cramp 'em, notwithstanding the Sulphur they possess.

The other hair-killing Ingredients congeal the Nutritious Juice, and likewise tear up the Pores, but in a different manner, being extreamly Acid, viz. *Aqua Fortis*, the Spirit of Nitre, the Oyl of Vitriol, &c.

A List of Med'cines to make the Hair Grow.

Vipers Fat, Bear's Fat, Oyl of Bays, Oyl of Spike-nard, Oyl of a Lizard, the Ashes of Frogs, Ashes of Wasps, Ashes of Bees, Maiden hair, Leaves of Southernwood, Ashes of Vinetwigs, Walnut Water, Honey.

Chymical Preparations.

Brandy, the Spirit of Honey.

The Forms of Receipts

A Lixive.

Boyl the Ashes of Vinetwigs and Bees, of each half an Ounce in eight Ounces of Water, Add half

half a handful of Ivy Leaves. Strain the Decoction and joyn to it half an Ounce of Brandy. After the head is shav'd and wash'd anoint it with this Lixive.

A Liniment.

Take of the Fat of Vipers, two Drams; Oyl of Bays, half an Ounce; Ashes of Bees, a Dram. Make a Liniment.

A List of Med^cines to make the Hair Fall.

Henbane, Opium, Orpiment, Quicklime, Arsenic, the Ivy Gum, the Juice of Spurge, the Blood of a Tortoise, the Blood of Baits.

Chymical Preparations.

Corrosive Sublimatum, Aqua Fortis, the Spirit of Nitre.

C H A P. XXI.

Of Remedies for Spots and Blemishes upon the Skin.

TO take off the Spots of the Skin we imploy such Remedies as abound in Volatil Sulphur and Phlegm; And contain but little Salt, or at least only that of the Grosser sort, which is not so apt to irritat the Humors lodg'd about the Skin. The Volatil Sulphur enlarges the Pores of the Cuticle, falls in with the Humors underneath and brings 'em off. To this purpose we use the Queen
T t of

of Hungaries Water, Strawberry Water, Snail Water, the Water of Green Frogs, *Lac Virginis*, The Water of the After-birth, &c. If the Pores of the Cuticle are very open, and the Liquors underneath Gross, then we make use of Soap, Oyl of Filbeards, Oyl of Accorns. If the part be Red, we apply fix'd Alkali's dissolv'd, such as the Oyl of Tartar *per Deliquium*, the Liquor of fix'd Nitre, &c.

Blistering, or Caustic Med'cines are improper, because they Spoil the Skin, leave a scar, and oftentimes do not remove the Blemish.

A List of Remedies to take off Blemishes and Marks.

The Water of Frogs Spawn, Snail Water, Strawberry Water, the Water of an After-birth, *Lac Virginis*, Oyl of Accorns, Soap dissolv'd in Brandy, Nitre dissolv'd in Rain Water, Oyl of Filbeards, the Juice of a wounded Vine, Purslain Leaves, distill'd Vinegar.

Forms of Receipts.

A Water for Red Marks.

Take the Juice of Purslain Leaves. Mix it with Distill'd Vinegar. And apply with a Linnen Rag over Night.

C H A P. XXII.

Of Remedies for Corns in the Feet.

The Cause of the pain. **C**orns are only an insensible part of the Skin, harden'd by Compression, which Squeezes and presses down the underlying sensible parts, and so Causes pain. If we could find a way of taking off this painless part without wounding or injuring the

Quick, the business of Cure were done. But 'tis almost impossible to take out the Root, which lies so close upon the Quick, without gashing, and creating pain. Some have chose to apply some light Caustics, which they pretend exhaust their force upon the dead Corn, before they come at the Quick; and so are incapable of doing harm.

To this purpose they imploy the Corrosive Sublimatum, Arsenic and *Lapis Infernalis*: But there needs a great deal of Caution in the application. Commonly we guard the adjacent parts from the injury of the Caustic, by a Plaister laid round the Corn. However, to my mind, these Caustics are too violent; and I think 'twere not amiss to exchange 'em for the Pouder of Savin, incorporated in Diapalma. If we mean to soften the Corns, we may apply Gum Ammoniac, the Plaister of Vigo with Mercury, *Diabotanium*. To these we may add the Oyl of Antimony, and many other Ingredients, which operate as Caustics.

A List of Remedies for Corns.

Houseleek applied, Gum Ammoniac, Galbanum, Vigo's Plaister with Mercury, Diabotanium, Corrosive Sublimatum, Arsenic, Oyl of Antimony, *Lapis Infernalis*, Pouder of Savin, Verdigris, Celandin Roots, Milk of the Figtree.

Forms of Receipts.

A Plaister for Corns.

Take the Pouder of Savin, incorporat it in Diapalma, soften'd in warm Water.

C H A P. XXIII.

Of Remedies for Warts.

WARTS are occasion'd by Humors congeal'd by Acids in the *Reicular* Membran of the Skin. At first View one would think Alkali's are their proper Remedies. But if we consider their hardness, we'll see cause to apply Emollients, and withall such things as scrape off the harden'd particles.

Emolli-
ents

The Emollients are Housleek, Turnsole, Marygold, Purslain, Bacon, &c.

Corrosives.

The gnawing Ingredients are the Spirit of Nitre, the Vitriol Stone, Salt with Garlic, Onions, Goats Dung with Vinegar, Agrimony mix'd with Salt and Vinegar. Some pierce the wart with a pin, heating it over a Candle. But this Method is very painful. Besides, 'tis apt to leave a blackness upon the part, which is every way as disagreeable as the Wart it self. If we offer to cut a Wart, it commonly returns, by Reason of the Blood Stagnating about the part.

C H A P. XXIV.

Of Remedies for Vermine.

The Cause. **L**ousiness is Familiar with Children, because they feed on Milk which Curdles easily and affords a matter fit for hatching the Eggs of these Insects; besides, their Flesh being soft, and but few Salts, they are not in a capacity to crush 'em; as adult Persons are whose Flesh is firmer, and the Pores of the Skin more Compact.

At

At first we must purge, adding Mercury to all the Internal Purgatives, which not only dispels the matter Remedies. where these Animals Nettle, but also Splits and cuts into peices the Eggs mix'd with the Blood.

Outwardly we apply such Ingredients as divide the Eggs, and remove the matter they're hatch'd in. Such are those which abound in sharp Salts, namely *unguis Odoratus*, *Staves Acre*, the Lye of the Ashes of Fearn Roots. But above all Mercury is the Specific. It attenuats the matter in which they're hatch'd, and by piercing thro their Substance kills 'em.

'Tis needless to mention the Infinite number External. of Remedies given in on this occasion. I shall only tell you by the way that Quicksilver is a Specific not only against Lice, but against Crablice and all other sorts of Vermine. And must needs operate by rarifying the Humors, because we find it swells up the Vermin, and makes 'em red.

A List of Remedies for Vermin.

Staves Acre, *Unguis Odoratus*, *Wormwood*, *Aloes*, *Oyl of prickly Cedar*, *Allum Water*, *Salt Water*, *Cinnabar*, *Mercury*, *Unguentum Neapolitanum*

Chymical Preparations

Wormwood Water (inwardly) *White Precipitat in Pomatum*, *Mercurial Preparations*.

C H A P. XXV.

Of Remedies for the Kibes and Chilblains.

Kibes and Chilblains are disorders of the Skin The Cause, caus'd by the Acid Particles of the Air stuck in among

among the Fibres, and splitting them. Their Cure is compass'd by Oily and Alkaline Remedies. The former invigle and imbarrafs the Acid parts; the other break and carry them off.

The Oyls or Sulphurs imploy'd on this occasion ought to be rarify'd and exalted, to the end they may reach the part where the Acids Nestle; But at the same time they must not be so Volatil as Wine or Brandy, else they'll rather stir up than imprison the Acids. The Med'cines so qualify'd are, The Grease Skimm'd from Leather, Hen fat and fat of Bacon, melted near a bar of Red hot Iron, and drop'd into Cold Water; by which means they take in a Nitre that rarifies them, and improves their penetrating qualities. Sometimes we apply the Bladder of a fat Hog, because the fat is there rarified by the Salts of Urine.

To prevent Kibes and Chilblains, we must wash the hands or feet in some sharp Salin Liguor, such as hot Urine, the Decoction of Mustard seed, &c.

The Alkaline Med'cines ought to be at once penetrating, and imbarrafs'd, for fear of dissipation, or of stirring up the Acids in the Skin. Thus we find hot Urine very successful, as also the Decoction of Sage in a strong body'd Red Wine, the Decoction continuing but half an hour, and the parts being wash'd therewith. If the Chilblanes are ulcerated, we apply Madam Feviller's Black Ointment, and other Alkali's fix'd with Oils, as the Ointment *Diapompholygos*, *Album Rafic*, &c. If we suspect a Gangrene, we may add a little Brandy,

A List of Remedies for Kibes and Chilblanes.

Leaves of Sage, Marjoram Leaves, Urine, Red Wine, Stale Lard, Capon's Fat, a Hog's Bladder, the Fat of Leather, Ceruss, Litharge, Minium, The Decoction of Mustardseed, &c.

CHAP. XXVI.

Of Ophthalmic Remedies.

IF we admit of any Specifics for Particular parts of The differ-
 the body, doubtless the Eyes have the best Ti-ence of
 tle to their share. Their Structure and Delicacy is Ophthal-
 widely different from that of other parts, The mics from
 Common Repercussives, Discussives and Deter- other
 fives, that we apply so happily to other parts, medicines.
 will occasion many disorders upon the Eyes, tho
 at the same time they operat just after the same
 manner as upon the other parts.

'Tis to be observ'd, all Oyls and Fat are pernicious to the Eyes; partly because they block up the Pores of their Membranes and so hinder the Transpiration of sharp humors; and partly by Reason they shut up the passage for Tears, and that which leads to the Nostrils, so that the Serum is not voided. Indeed penetrating Oyls such as that of Vipers are not so much amiss, and may be look'd upon as an Exception from the General Rule. Observations.

When the white of the Eye is inflam'd we use to apply Repercussives, such as Plantan Water, Sal Prunel, refin'd Nitre, Allum, the Whites of Eggs, White Vitriol, Mucilages, Sour Apples Coddled, Phlegm of Allum, the Decoction of Quince Tree Leaves, &c.

'Tis true most of these Med'cines operat by shutting the Pores, and Congealing the humors, whose Fermentation gave rise to the Inflammation. And accordingly at first they abate the Inflammation: but then afterwards they make it continue longer. And therefore in the Winter, when the Indisposition proceeds from Cold Wind, or Phlegmatic Causes, they ought to be avoided. When 'tis occasi-

on'd by the Fermentation of sharp Salts, which is easily discover'd by the Sharpness and Corrosiveness of the Tears ; When Smoak, Fire and Dust gives rise to it by infeebling the parts : in these cases they are very proper, especially the Solution of purified Nitre, because the Nitre being equally fraughted with Acids and Alkali's does not congeal. We may likewise apply the whites of Eggs in which a peice of Allum has been stirred about for some time, or else a Coddled Pippin.

When the Redundancy of Blood, or its Congulation occasion'd by Acid Spirits, gives being to the Inflammation, in that case after blooding and purging, Hippocrates advises to make use of pure Wine, in order to animat the Blood and put it in motion.

If we apprehend the Blood is Gross, and the person of a pituitous Constitution, we must exhibit inwardly Absorbents and such things as make the Blood Liquid, as Sudorifics providing they do not over Ferment the Humors.

External Remedies. Outwardly we apply Discussives, for Example Cataplasms of Bread Crum, Milk and Saffron; the Troches *Albi Rafis* dissolv'd in Rose Water, &c. We likewise use Fennel, Celandin, Blew-bottle and Eyebright Waters, the Infusion of *Crocus Metallorum* either by it self or mingled with a Triple quantity of these Waters. When the pain is abated, we may apply to the Eyelids (the Eye being shut) a Rag steep'd in Spirit of Wine. Besides the above mention'd Remedies we are wont to apply the Decoction of Florentin Orris, or the Solution of Sal Armoniac. The *Aqua Celestis* is also mightily esteem'd. 'Tis made by taking half a pound of the first or second Lime Water, with two Scruples of Sal Armoniac ; and leaving them in a Copper Vessel till the Liquor become bleu ; which is to be Filtrated and reserv'd for use. Prepar'd Tutty, Calaminar Stone well pounded and applied in Ointments. and dead Wine may be added to the account. Caustics, Setums, and Blistering

ing Plaisters applied to the neck are accounted for elsewhere.

All these Remedies operat by sucking up the A-^{Reflecti-} acids they meet, and making them fluid, so as to push ^{ons.} off the Inflaming matter in its Circular course.

Some may say, Wine that is not quite dead will Discuss the better; but we ought to consider that Flat Wire is not so apt to turn soure, and its Volatil parts are more free and disengaged.

The Spots which sometimes cover the *Cornea* ^{Spots upon the Eyes.} take rise from a Gross Matter dislodg'd of its Vessels; and are not to be remov'd without strong Discussives, such as the Infusion of Crocus Metallorum, Aloes, Sugar Candy dissolv'd, &c. The Purgatives and Sudorifics which melt Down the humors must be employ'd inwardly. Sometimes, providing the Spots be only upon the *Cornea*, we may make use of Caustics dissolv'd in some Water. If these marks come from the Scars of the small Pox remaining in the *Cornea*, or from great Inflammations, they're commonly incurable, because there's no taking 'em off without gnawing the Membran.

Cataracts and Webs being occasion'd by the same cause, demand the same Remedies, and moreover whatever attenuats the humor and is able to scrape off the parts of that Excrecence; Such are Sugar Candy, Oyl of Paper, distill'd Oyl of Linseed, the Water of Crabs, Turty in Pouder, and many others to be met with in Authors, especially if the Film be not very deep.

The Ulcers of the Eyes should be mundified and dried; for those purposes we employ most of the Resolutives, as being apt to swallow up acids. But at the same time we must take care we do not irritat the part, because tis so very sensible; and likewise avoid all Emollients such as milk and Oyls which put a stop to the Transpiration and cleansing of the Eye. The proper Remedies are the Decoctions of Agrimony, Florentin Orris Roots, and Fennel seed, to which we add a little prepar'd Tutty or Pampholyx or Crude Antimony. These suck

suck up the acids, and correct the viscosity of the matter; and so by freeing the Ulcer of its viscous and acid parts, dispose it for healing.

Wounds.

For Wounds of the Eyes we commonly use softening things, such as the warm Blood of a Pigeon, Womans Milk with a small quantity of Frankincense dissolv'd in it. Now 'tis true, these Med'cines pacify and appease during the time of their Application; but the truth is, we only use 'em because we can use nothing else; for Repercussives might cause a Mortification, and Retolatives an Inflammation; Suppuratives might melt down the humors of the Eye, and occasion too heavy a loss of substance; and besides, being unctuous, are very pernicious to the Eyes, as I intimated before: Nay, to carry the matter further, the Milk and Blood now mention'd, may ferment and corrupt the Wound, and so not only keep up the Wound, but draw down Defluxions. Every body knows, the Milk is apt to become soure, and the Blood to putrify.

For my part, I think the best way is to apply nothing at all to the Wounds of the Eyes; only clean 'em with a little warm barley Water, and endeavour to reunite the parts. Sometimes a drop of the Oyl of Turpentin, or that of Wax will not do amiss.

A List of Ophthalmic Remedies.

*PL*antan, Clary-seed put in the Eye to clean it;
 Roses, Celandin, Eye bright, Florentin Orris,
 Fennel, Blaw-bottle, Daff, Camphyr, Fig-tree Leaves
 their Decoction in Water; the whites of Eggs, Urine,
 Wine, Incense, Copperas, Vitriol, Tutty, Myrrh,
 Aloes, Allum, Burnt Lead, Sugar Candy, Muci-
 lage of Flea-wort.

Chymi-

Chymical Preparations.

The Waters of Plantan, Roses, Fennel, Eye-bright, Celandin, Frogs spawn; Purified Nitre, Sal Prunel, Crocus Metallorum, Sal Armoniac, Spirit of Wine camphoris'd, Phlegm of Allum, Oyl of Paper, Oyl of Linseed, distill'd Vinegar, Burnt Brass.

The Forms of Receipts.

A Repercussive Collyrium for Inflammations.

Take Rose-water and Plantan-water, of each one ounce; purified Nitre, a dram; mix and dissolve, and steep in it a Cloth to be applied to the Eye.

Another.

Take the white of an Egg, stir it with a piece of Allum till it attain to a Consistence; then apply.

A Resolutive Collyrium for ulcerated Inflammations.

Take Fennel water, Eye-bright-water, of each two ounces; Troches Albi Rafis, and Crocus Metallorum, of each a dram; Aloes half a dram; Spirit of Wine Camphoris'd, thirty drops.

A Deterfive Collyrium to take off Scars.

Take Plantan Water, Eye-bright Water, of each an ounce; prepar'd Tutty, half a dram; Sugar Candy, two scruples; Gum Arabic, a scruple.

A Water for Cataracts.

Take of Aloes pulveris'd, two drams; Crocus Metallorum, a dram and a half; prepar'd Tutty, four Scruples; mix 'em with four ounces of Whinewine, four ounces of Fennelwater, two ounces of Celandin-water; macerat 'em four and twenty hours, and shake the bottle when ye use it.

C H A P. XXVII.

*Of Remedies for a Deafness, or Noise
in the Ears.*

DEafness being oftentimes occasion'd by very different Causes, requires as different Remedies. Sometimes the External Passage of the Ear is block'd up; sometimes the hearing Nerve is broke, or Paralytic; and sometimes the immediate Organ of Hearing is disorder'd.

The difference of If the External Passage be stop'd, it must be clear'd; if any foreign thing be lodg'd in it, it must be drawn out with a Piercer or Ear-picker, or by an Incision upon the hinder part of the Ear.

If harden'd Wax stop the Passage, we must see to clean it with an Ear-picker. Sometimes indeed the Ear-wax sticks so close to the Internal Membrane of the Cartilaginous or bony Passage, that we are oblig'd to soften it with warm Water whetted with a little Spirit of Wine, or Oyls laden with Alkaline Salts; such as the Oyl of bitter Almonds, the Gall of several Creatures, Oyl of Linseed, and whatever is able to remove the acids that congeal the Wax.

Sometimes the Glandules of the Passages are mightily swoln: If they're inflam'd, bleeding is the best Remedy, and ought to be often repeated. If the humors be very thick in the beginning of the Disease, then we may apply discussive and ripening Ingredients, as Cataplasms of white Lillies, and the four Meals; Injections of the Oyl of Lillies, with some drops of the Spirit of Wine, and Ox Gall. On the other hand, if we find the Humors subtil, the Pain violent, and the Parts much distend.

distended, in that case we make Injections of Barley-water with a little Honey. Sometimes we make use of Milk and Anodyns. But by all means we must avoid Repercussives.

If Deafness be imputed to the immediat Organ, 'tis incurable. If it arise from Obstructions of the Nerves, 'tis cured just as a Palsy; so 'tis needless to insist upon 'em. To pass on to the Remedies for a Noise in the Ears, we must consider this Noise varies according to the Causes which give rise to it, and the manner of the sound. Sometimes it gives a tingling and hissing Noise, being occasion'd by the shaking of the extended Membrans of the Drum or Labyrinth. Sometimes it gives a humming murmuring Noise, occasion'd by the shaking of the unbended and loose Membrans. The Causes of this shaking are the beating of the Arteries, Inflammations, Apothemes, Ulcers, the fermentation of sharp humors, &c.

In a tingling or hissing Noise, we apply Oily Emollients in order to remove the Distention of the Organ, and temper the motion of the fermenting parts. To this purpose we make use of Milk, Barley-water, Oyl of sweet Almonds drawn without Fire. If Pain accompany the tingling, we may add some Narcotic Essence, but withal very cautiously.

In a humming murmuring Noise we endeavor to remove the moisture that unbends the Membrans, and at the same time cleanse the Ulcers, if there be any, and bring forth the gluy sharp humors. All these Indications are answer'd by such Resolutives as the Spirit of Wine, Essence of Rosemary; the Queen of Hungary's Water, the Tincture of Myrrh, and several others.

A List of Remedies for a Deafness, or Noise of the Ears.

THE Juice of Onyons, Coloquintida, Dill-seed, Cumin-seed, Leaves of Rue, Rosemary, Calamint, Penny Royal, Horehound, Camomil, Ox-Eye; in Decoctions.

Aloes, Ox-gall, Bull's-gall; Oyls of Bays, Rue, Camomil; Juice of Coleworts, Henbane-seed its Oyl; Oyl of Mandrake, Oyl of bitter Almonds, Oyl of Nuts, Anis and Coriander-seed.

Chymical Preparations.

Oyl of Paper, Oyl of Bricks, Brandy, Spirit of Wine; the Queen of Hungary's Water; the Tincture of Myrrh; the Tincture of Castor; the black Oyl of Tartar; the Essence of Rosemary; liquid Laudanum.

The Forms of Receipts.

Take the Juice of Onyons, one ounce; Brandy, one ounce; warm 'em, and pour some drops into the Ear.

To soften the Ear-wax.

Take the half of a Coloquintida Apple; boyl it in White-wine, or the Oyl of bitter Almonds, till the Wine be wasted. Then add some drops of the Tincture of Castor and Ox-gall, and drop it into the Ear.

Against a Noise in the Ears.

Take of Coloquintida, an ounce; Cummin and Coriander-seed, of each two ounces; boyl in Oyl of Rue, which strain and mix with an ounce of the Queen of Hungary's Water.

Against Pain in the Ears.

Take of the Oyl of bitter Almonds, an ounce; liquid Laudanum, two drams; pour some drops into the Ear.

CHAP:

C H A P. XXVIII.

*Of Remedies for the Tooth-ache, and
the Teeth's being set on Edge.*

THE common Anodyns do seldom remove the Tooth-ach. And indeed there are few Specifics yet known, that are able to ascertain the Cure. The Pain being seated in the Nerve planted in the root of the Tooth, there are few Remedies can reach so far: Or if they reach, are able to fetch out the sharp humors from thence.

If the Tooth be hollow, and the Nerve discover'd bare, we may fill it with Cotton steep'd in Box-wood Oyl, or Oyl of Guaiacum; thus we both guard off the cold Air and sharp humors, and mitigat the Pain. Cloves, or the Oyl of Cloves are proper for the same purpose. But if the Nerve be quite bare, the surest Method is to apply a drop of *Aqua Fortis* or Spirit of Nitre; and by a sort of Caustic force, to render it insensible. At the same time, to keep the Tooth from wasting, we may fill it with Leaf Gold or Lead.

If the Pain be partly occasion'd by a Defluxion of sharp and subtile humors, we may either divert 'em by blistering Plaisters behind the Ears, or evacuate 'em by holding a piece of Pellitory Root in the Mouth, or smoaking Tobacco. Besides, these same Med'cines being stock'd with sharp Salts, may conquer the acids that give rise to the Disorder. Sometimes we may order a little Spirit of Wine camphorisd to be held in the Mouth. It is very good both for discussing and pacifying.

If all these Remedies be ineffectual, we must have recourse to Narcotics, both for Internal and External use. Sometimes we apply Plaisters of Opium to the Temporal Artery. If after all, the Pain

Cause
of the
Tooth-
ach.

Pain be obstinat and confin'd to one Tooth, it must be drawn. If the Tooth be wasted to a small bit, and that not fasten'd to the Neighbouring Teeth, we may put a little Frankincense upon it, so 'twill fall out.

When the Teeth are set on Edge, we must imploy such Remedies as are fit to take up the acids that gave rise to the Disorder. To this purpose we imploy sweet or bitter Almonds, Walnuts, dry'd or burnt Bread. Now all these Ingredients either remove the acids, or imprison 'em within their Oily parts, so as to answer all the Indications. Purslain is likewise us'd; it possesses a prodigious quantity of volatil Salts, and besides, a gluy Juice capable to swallow up the acids it meets with.

To conclude this Chapter, let's consider what Remedies are proper to mitigat the Pain that seizes Childrens Gums while they breed Teeth. In this case all our design is to soften the Gums, and open the Fibres for the egress of the Tooth. Now in order to compass that end, Mallows or Marsh-mallows soak'd in a little Honey are very serviceable. Emollient Decoctions are also good to wash the Mouth with. And when all other means are successless, we must cut up the Gum, and-so shorten the poor Infants Pain.

A List of Med'cines for the Tooth-ach.

Cloves, Roots of Pellitory of Spain, Ashes of green Earth, Wine hot, Henbane, the Oyl express'd from its Seed; Opium, Tobacco smok'd, the Vitriol Stone, blistering Plaisters, Mastick, Nettle Roots smok'd as Tobacco.

Chymical Preparations.

Oyl of Box-wood, Oyl of Guaiacum, Essence of Cloves, Spirit of Wine; the spirit of Wine camphor'd, the Queen of Hungarys Water; Spirit of Nitre,

Remedies for Cankers in the Mouth.

207

Nitre, the acid of Sulphur, Oyl of Vitriol, Aqua fortis, liquid Laudanum.

A Receipt for an Universal Tooth-ach over all the Teeth.

Take a spoonful of the Decoction of Mint, add fifteen drops of the Spirit of Vine camphoris'd; and hold it in the Mouth hot.

The Remedies to be us'd when the Teeth
are set on Edge, are;

Almonds sweet and bitter, Walnuts, Filbeards,
dry bread, Purslain, &c.

Those for cleaning the Teeth, are;

Coral in Powder, Bricks pulveris'd, Lilly Roots,
Allum, Salt, Nitre, Mallow Roots, &c.

A Receipt for cleaning the Teeth.

Boyl Lilly Roots with Sea Salt and Allum, then
dry 'em, and rub the Teeth.

C H A P. XXIX.

Of Remedies for Cankers in the Mouth, and the falling of the Uvula.

VENEREAL and Scorbutic Shankers arising from a total Infection of the Mass of Blood and Humors, together with their proper Remedies, are already accounted for: As for particular Ulcers of the Mouth, occasion'd by eating and drinking some improper thing, or some such Cause; these I say cannot well be treated with Ointments like another part, and therefore we use to make a Crust to defend 'em from the Spittle and Victuals, and so

U u

give

give Nature a reprieve to make up the Nourishment that's wanting.

In order to make this Crust, we use to apply the Vitriol Stone, Spirit of Nitre, and sometimes *Aqua fortis*. If we desire a weak Caustic, we mix the acid of Sulphur or Spirit of Vitriol with *Narbonne* Hony, and touch the Ulcer with a little Cotten dip'd in it, and fasten'd to the end of a small Stick. After the *Eschara* is made, we must not touch it for two or three days; a precipitant impatience to handle it, does oftentimes augment both the Scar and the Ulcer.

Garga-
risms.

We are wont to order Vulnerary Gargarisms, that is, drying and deterfive ones made of Plantain Leaves, Briar-tops, Rose-leaves, Agrimony, &c. to which we joyn Hony, Sal Prunel, Allum, or Syrup of Mulberries, according as the Indications require.

Sometimes, to make a slight Crust, we apply the green Water describ'd Cap. vii. Part. iv. or else *Hartman's* green Water, which is much the same. To guard the Wound, dry up the Ulcer, and imbarrais the acids, we use Fumigations of Incense, Mastic, Myrrh, &c. the Smoak being convey'd to the Mouth by a Funnel; or at least the head being cover'd, and held over the Fire where they're burnt, shutting and opening the Mouth by turns. *Platerus* tells you he thus cur'd one that had the half of the Uvula eaten away by an Ulcer in the Palate, and that when all other things had been try'd to no purpose.

The Luxation of the Uvula is cur'd by Astringents, hot and drying Remedies, such as are able to contract its Fibres, call up the Spirits into it, and squeeze out the viscous humors that disorder it. To this purpose we imploy Pepper in Powder, Mustard, Pomgranat Flowers, Roses, Cyprus Nuts, and many other Styptics already accounted for.

A List

A List of Remedies for Cankers in
the Mouth.

*A*grimony, middle Comfrey, Sarsille, Plantain, red
Roses; in Decoctions and Gargarisms.
Briar-tops, Pomgranat-peel, Pomgranat-flowers,
Lovage-leaves, Allum, Viriol.
Incense, Myrrh, Mustic; in Fumigations.
Mulberries boyl'd in water, Syrup of Mulberries
mix'd with water.

Chymical Preparations.

The green water describ'd Chap. vii. Hartman's
water, Spirit of Sulphur, Spirit of Viriol, Spirit of
Nitre, Spirit of Allum, Spirit of Hony, Tincture of
Lack.

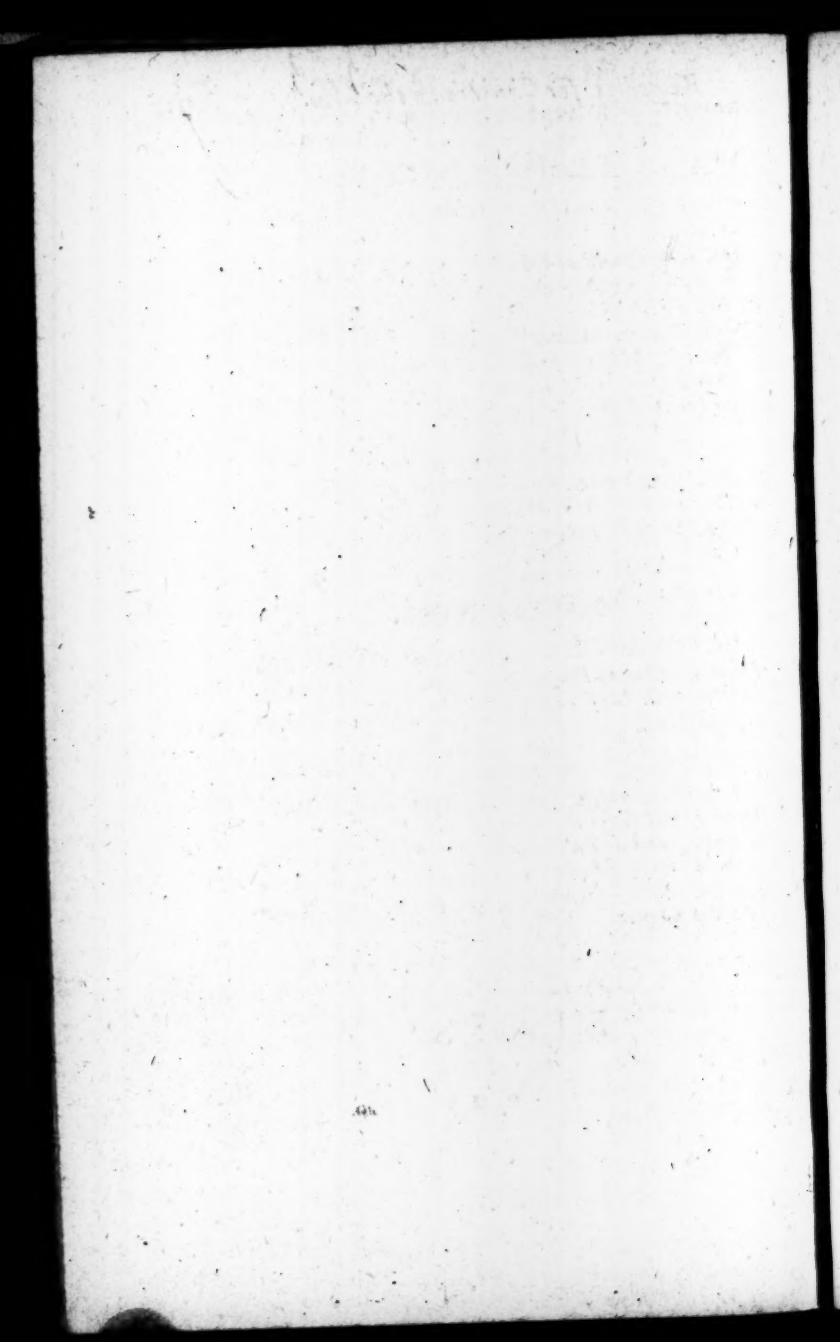
The Forms of Receipts.

Take fifteen drops of the Spirit of Sulphur, with
half a spoonful of Hony; dip Cotton or a Rag into it,
and touch the Ucers in the Mouth, fastening it upon
a small stick.

A Gargarism.

Take of Agrimony, a handful; Briar-tops, as much;
leaves of red Roses three Pignils; boyl'em in a quart
of water, and add a dram of Sal Prunel, an ounce
of the Syrup of Mulberries, and half an ounce of the
Hony of Roses. Strain all, and gargle the Mouth
with the Liquor.

FINIS.



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